

RESILIENT KERALA
Additional Financing Program for Results [PforR]

Environmental and Social Systems Assessment [ESSA]
Addendum Report

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THE WORLD BANK
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List of abbreviations and acronyms

ACS	Additional Chief Secretary
AE	Assistant Engineer
AEE	Assistant Executive Engineer
CPCB	Central Pollution Control Board
CRZ	Coastal Regulation Zone
DEA	Department of Economic Affairs, Ministry of Finance, GoI
DLI	Disbursement-Linked Indicator
DPO/L	Development Policy Operation / Lending
DoE	Department of Environment, Government of Kerala
DoECC	Directorate of Environment and Climate Change
DoR	Department of Revenue, Government of Kerala
E & S	Environmental & Social
EC	Environmental Clearance
EE	Executive Engineer
EHS	Environmental, Health & Safety
EIA	Environmental Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSA	Environmental and Social Systems Assessment
FGD	Focus Group Discussion
G(R)M	Grievance Redressal Mechanism
GoK	Government of Kerala
GoI	Government of India
GP	Gram Panchayat
HED	Harbour Engineering Department (Department of Fisheries)
HLEC	High Level Empowered Committee
IDRB	Irrigation Design and Research Board
IITM	Indian Institute of Technology Madras
KCZMA	Kerala Coastal Zone Management Authority
KII	Key Informant Interviews
KIIDCO	Kerala Irrigation Infrastructure Development Corporation
KILA	Kerala Institute of Local Administration
KSCADC	Kerala State Coastal Area Development Corporation Limited
KSDMA	Kerala State Disaster Management Agency
KSPCB	Kerala State Pollution Control Board
LSG	Local Self Government
M & E	Monitoring & Evaluation
MoEFCC	Ministry of Environment, Forests and Climate Change
NCCR	National Centre for Coastal Research, NIOT
NCSCM	National Centre for Sustainable Coastal Management
NGT	National Green Tribunal
NIOT	National Institute of Ocean Technology
O & M	Operations & Maintenance
PAD	Program Appraisal Document
PDO	Program Development Objective
PforR	Program for Results
PMC/SS	Project Management Consultants / Support Services
RBCMA	River Basin Conservation and Management Authority
RA	Result Area
RF	Results Framework
RKDP	Rebuild Kerala Development Programme
RKI	Rebuild Kerala Initiative
SEIAA	State Environmental Impact Assessment Authority
SMP	Shoreline Management Plan
SPF	State Partnership Framework
SWAK	State Wetlands Authority of Kerala
WB	World Bank
WRD	Water Resource Department
WRM	Water Resource Management
US\$	United States Dollar

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Executive Summary

Background

State of Kerala is highly vulnerable to natural disasters such as cyclone, monsoon storm surge, coastal erosion, sea level rise, tsunami, flood, drought, landslides/ land subsidence and earthquakes and changing climatic dynamics given its location between the western coast and steep slopes of the Western Ghats. In last 4 years the state has seen several such adverse events one after the other, starting with Cyclone Ockhi in 2017, floods and landslides in 2018, 2019 and 2020, Nipah virus in 2019 and present COVID-19 pandemic. The 2018 floods led to widespread loss of life, property, and habitats, affecting several millions and leading to economic losses of nearly US\$3.74 billion (Rs. 26,720 crores). These events and their impacts highlighted the level of under-preparedness of the State to deal with these natural disasters and climate change shocks.

In order to support GoK, World Bank initiated a strategic engagement to build multidimensional resilience in Kerala through First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million- June 2019) by extending support to the Government's Rebuild Kerala Development Programme (RKDP) — the state's strategic roadmap for recovery, rebuilding and resilience. This partnership has improved state's capacity to respond to disasters and improved resilience of the community and treat resilience and disaster risk management as cross-cutting and important concerns in policy formulation and implementation. It has also led the way towards deepening and broad-basing this partnership by looking at additional sectors crucial for building resilience of the state and citizens to shocks of climate change, natural disasters and disease outbreaks.

Building on the foundations of policy and institutional reforms initiated under Resilient Kerala DPO 1, the World Bank supported a Program for Results (PforR), which forms a part of the overall Government program. The PforR's development objective was to enhance the State Government of Kerala's (GoK) resilience against the impacts of climate change, natural disasters and disease outbreaks. The PforR will support the two Results Areas (RAs) that contribute to the outcomes of RKDP - first through support for state-wide systems and institutions development for managing shocks from climate change, natural disasters and disease outbreaks, and second for piloting sectoral investments in four districts along the Pamba river basin- Alappuzha, Idukki, Kottayam, and Pathanamthitta. The duration of the PforR is 2021–2026, and the sectoral coverage is as follows: RA 1: Fiscal, Disaster Risk Financing and Insurance, Social Protection, Urban, and Disaster Risk Management and RA 2: HealGeetika Hora Page 2 4/25/22th, Agriculture, Water Resource Management, and Roads. The Program cost is US\$ 530 million.

Program Description (Additional Financing)

While many sectors have deepened their dialogue to build multidimensional resilience, Kerala suffered additional shocks in 2019, 2020, and 2021. In order to respond to the above situation, the PforR (hereinafter referred as the Parent PforR) is being broadened and deepened with additional financing (hereinafter referred as the Additional Financing (AF) PforR) through the inclusion of coastal zone resilience as a critical new focal area, integrating it with the multidimensional resilience efforts under RKP, and by deepening efforts to mitigate the impacts of recurrent floods in the Pamba river basin. The AF PforR

instrument is critical at this moment to set up the appropriate upstream institutional arrangements, technical capacities, and systems for planning, budgeting and implementation and the Program will draw from the Bank's global experiences on integrated coastal zone management (ICZM) and best practices in knowledge sharing and management, which are detailed in the next section. Through this request, GoK aims to leverage the State Partnership and the Bank's resources to make timely adjustments to respond to rapidly and somewhat unpredictably evolving impacts of climate change in the State. The Preliminary Project Report (PPR) for the proposed AF was submitted by GoK to the Department of Economic Affairs (DEA) on February 1, 2022 and the DEA request to the Bank is being followed up on.

Key Changes to the Program under the proposed AF include:

- **New Activity on Strengthening Coastal Resilience.** The proposed new DLI 10 under Results Area 2 aim to strengthen coastal resilience and management to sustainability protect, reduce vulnerability to erosion, environment and other hydro-meteorological hazards in the coast of Kerala by (i) improving coordination and strengthening the institutional capacity for sustainable shoreline management; (ii) preparing a long-term Shoreline Management Plan (combining policy options and technical solutions) for the entire coastal stretch based on the sediment cell concept; and (iii) pilot investments supporting a hybrid of hard and soft solutions in select districts along and adjacent to Pamba basin requiring urgent attention.
- **Enhancement of Water Resource Management in the Pamba river basin.** The proposed new activities under DLI 7 would aim to address severely flood-prone regions and minimize losses in the future. The Program would aim to strengthen the WRD and equip the Integrated Command and Control Centre within WRD with innovative tools for flood management. Based on an assessment of recent flood-related damages, the need for critical investments will be reassessed. Accordingly, investments under AF would target to minimize flood damages in the future while giving due consideration to environmental aspects. The potential activities may include (i) restoration of rivers by improving their carrying capacity; and (ii) restoration of lakes embankments; and (iii) roll out of critical remedial measures in flooding hotspots. These investments will be backed by hydraulic and structural assessments.
- **New Activity on Climate Budget Reform.** The proposed new DLI 11 under Results Area 1 aim to strengthen a whole-of government approach to resilience by leveraging the State's governance and public finance framework to enhance policy and institutional environment, through potential Climate Budget Tagging (CBT) exercise led by the Department of Finance.
- **New Activity on Strengthening Open Data.** The proposed new activity will develop Diagnostics and a Roadmap for Open Data Initiative to Strengthen Climate and Disaster Resilience.

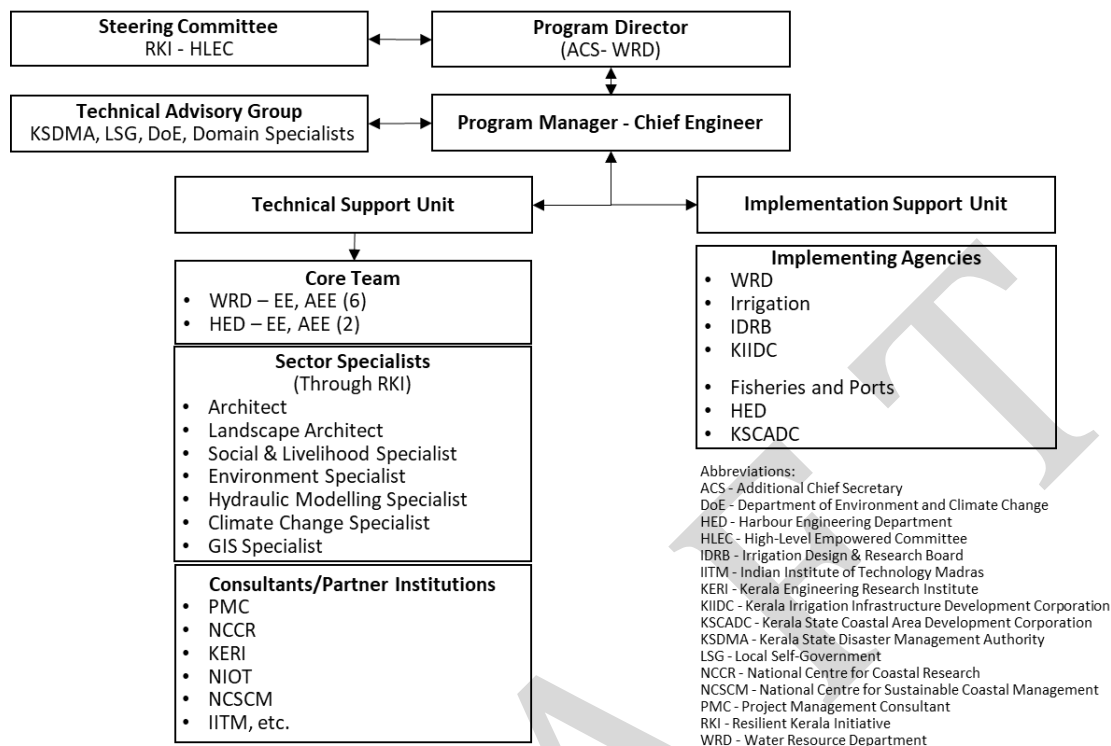
Table: Disbursement Linked Indicators

DLIs	Fund Recipient	RKP Financing (USD M)	AF Financing (USD M)
RA 1: Strengthening transversal systems for resilience			
DLI 1: Fiscal sustainability of GoK to cope with disease outbreaks and natural disasters is strengthened	DoF	24.38	0
DLI 2: Disaster-related adaptive safety net system of GoK is strengthened	DoF	25.00	0
DLI 3: DR Financing and insurance capacity of GoK and vulnerable households in Kerala are improved	DoF	35.00	0
DLI 4: Urban local bodies developed and sanctioned risk-informed urban MPs and priority action plans	LSGD	30.00	0
DLI 5: Climate risk information integrated into local body DRM plans	LSGD	65.00	0
DLI 11 (Newly added in AF): Climate Budget produced as part of GoK's annual state budget for ten key climate relevant sectors.	DoF	0	10.00
RA 2: Embedding resilience in key economic sectors			
DLI 6: Capacity to track & respond to zoonotic disease outbreaks of human importance in a timely manner	DoHFW	35.00	0
DLI 7: Integrated river basin management plan is developed for Pamba Basin and implementation commenced	WRD	35.00	50.00
DLI 8: Farmer producer organizations have increased access to new and organized markets	DOA	40.00	0
DLI 9: CRN is rehabilitated and/or maintained to meet resilient service standards in the Pamba Basin	PWD	80.00	0
DLI 10 (Newly added in AF): Long-term Shoreline Management Plan for the entire coastal stretch is developed and investments to protect coastal erosion in critical sites	WRD, HED, DoECC, other relevant organizations	N/A	90.00
Total:		370*	150

Institutional/ Implementation Arrangements

The proposed new activities on coastal resilience and taking a holistic “catchment to coast” approach to water resilience involve new departments and organization / agencies. In addition to the WRD – a line department of GoK, new implementing agencies include (i) Harbour Engineering Department (HED) under the Department of Fisheries and (ii) Kerala State Coastal Area Development Corporation Limited (KSCADC), Kerala Irrigation Infrastructure Development Corporation (KIIDCO) and Irrigation Design and Research Board (IDRB) – all state government organizations. Bringing these additional

departments / agencies / organizations on board for the AF PforR will also support capacity building for holistic coastal resilience. The proposed institutional arrangement is shown in the following figure.



ESSA Scope and Methodology

The Environmental and Social Systems Assessment (ESSA) Addendum was prepared by a team of environmental and social specialists from the World Bank. The team examined the following in relation to the AF PforR: (i) the potential E&S effects (including direct, indirect, induced, and cumulative effects as relevant); (ii) the borrower’s capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects; (iii) the comparison of the borrower’s systems—laws, regulations, standards, procedures, and implementation performance—against the core principles and key planning elements to identify any significant differences between them that could affect Program performance; (iv) the likelihood that the proposed operation achieves its E&S objectives; and (v) recommendation of measures to address capacity for and performance on policy issues and specific operational aspects relevant to managing the AF PforR risks (e.g. carrying out Staff training, implementing institutional capacity-building programs, developing and adopting internal operational guidelines) through a Program Action Plan (PAP).

The ESSA Addendum was informed by a detailed review of secondary literature including applicable policies, Acts, Rules, Government Orders, Circulars, notifications and guidelines as well as evaluations (on institutional or scheme performance) websites, internal assessments, reports, studies. The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. This also included a review of the borrowers systems for engaging with citizens, especially the most marginalized and

excluded as well as their grievance redress. Apart from a desk review of available information, personal interviews and consultations were also held with the community and institutional stakeholders.

Owing to COVID-19 related mobility restrictions, the majority of community consultations were carried by a team of resource persons from Kerala Institute of Local Administration (KILA), an autonomous capacity building institution of the state that was commissioned by the Bank team. About 42 Focus Group Discussions (FGDs) and 21 Key Informant Interviews (KIIs) were conducted in 5 coastal districts (Alappuzha, Kasaragod, Kozhikode, Malappuram and Thrissur) and 2 river basin stretches (Meenachal and Manimala). And, the institutional stakeholder consultations were carried out by the Bank team largely through a virtual format. About 10 virtual meetings with the relevant stakeholders covering environmental aspects and 7 on social aspects were undertaken.

Assessment of Legal Policy Framework

Environment

As relevant to the AF PforR, the national and state framework is well developed and established. The applicable legislations – both national and state - include Environment (Protection) Act 1986, CRZ Notification 2011 and 2019, Wetlands (Conservation and Management) Rules, 2017, Air (Prevention and Control of Pollution) Act 1981, Water (Prevention and Control of Pollution) Act 1974, Noise Pollution (Regulation and Control) Rules 2000, Construction and Demolition Waste Management Rules 2016, Solid Waste Management Rules 2016 (and various references in the state legislations such as the Kerala State Policy on SWM 2018, Kerala SWM Operational Guidelines, 2017, Kerala Municipalities Act 1994 and The Kerala Panchayat Raj Act 1994), Plastic Waste Management Rules 2016 and state order, national Forest legislation (Indian Forest Act 1927, Forest Conservation Act 1980 and Forest Rights Act 2006) and associated state legislation (Kerala Preservation of Trees Act 1986), Wildlife (Protection) Act 1972, Ancient Monuments and Archaeological Sites and Remains Act 1958 and associated rules, and Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules 1998.

For the AF PforR's coastal protection investments, MoEFCC is responsible for the regulatory requirements pertaining to the CRZ and EIA Clearance if these have to be obtained at the national level. The relevant state-level regulatory agencies include the Kerala Coastal Zone Management Authority (KCZMA)¹, State Environmental Impact Assessment Authority (SEIAA),² State Wetlands Authority of Kerala (SWAK),³ Kerala State Pollution Control Board (KSPCB) and the State Forest Department. All of these agencies are well-established and operationally functional. However, these agencies do not have the capacity to proactively engage in procedural compliance and to check for their adherence to the clearance conditions. This assessment revealed that there is a need for the RKI Secretariat to have a monitoring oversight to ensure that clearance conditions are adhered to and clearances are obtained timely. Apart from these, the PforR activities involving civil works will have only limited environmental impacts and do not entail any

¹ <http://keralaczma.gov.in/#home>

² <http://www.seiaakerala.in/home/>

³ <https://envt.kerala.gov.in/state-wetland-authority-kerala-swak/>

upfront clearances. There are only certain procedural requirements such as obtaining consents prior to the commencement of civil works. These are contractor responsibilities that will have to be supervised by the respective departments and agencies that are engaged in civil works. If there are specific situations during implementation, e.g. the NGT orders, then additional procedural requirements may be applicable. The environmental standards included in the various legislations will have to be adhered. There is sufficient capacity within the different implementing departments / agencies, their consultants and their contractors to meet these legal requirements.

Further, the EIA requirements do not emphasize on stakeholder / community consultations and disclosure as the Bank's requirements do. Hence, this gap will need to be addressed through conducting EIAs (with consultations and disclosure) as per the ToRs that will be developed by RKI Secretariat after program effectiveness. Additionally, to ensure that there is proper adherence to the clearance conditions, it is required to have RKI Secretariat to conduct periodic supervision to ensure that the implementation performance is in line with the regulatory clearance given.

Social

The national and state level laws and legal policies have been reviewed and are found to adequately safeguard the interests of all communities likely to be impacted by the proposed investments under the AF, especially women, socially and economically vulnerable groups, scheduled castes and scheduled tribes in the implementation of schemes across sectors. Specifically, the laws and policies related to land acquisition, local self-governance, labour, gender and grievance redressal and citizen's engagement all provide an empowering and conducive environment for affected communities. With additional investments proposed for coastal protection, flood recovery and shoreline management, the applicable laws and policies such as the CRZ Notification 2011 and 2019 were also reviewed to see how these impact traditional coastal communities, their houses, lands and the livelihoods of fisher-folk communities. However, despite some of these strong legal and policy frameworks, there is inadequate emphasis on social impact assessment, management and monitoring requirements to address social risks. Thus, these frameworks will be further strengthened by enhancing capacities of implementing departments on social risk management, supporting the development of institutional mechanisms such as for undertaking social risk screening for each site where works are envisaged and finally to develop project-specific social mitigation measures. The ESSA for PforR had done a comprehensive assessment of the relevant laws and policies and this section extracts all laws and policies that continue to be relevant under AF.

In addition, of particular significance is the Livelihood Inclusion and Financial Empowerment (LIFE) Mission of GoK that seeks to provide quality housing options to the under-privileged sections of society amongst whom people staying in outlying or coastal areas are an important target group. Until September 2021, over 12, 067 houses that were constructed were handed over to beneficiaries of which 7832 were for homeless people from general communities, 3964 for beneficiaries from SC/ST communities and 271 for homeless people from fisher-folk communities. The GoK is targeting to reach more people from coastal communities, but given the strong dependence on proximity to the coast for their livelihoods, this is not a priority for the communities. ESSA highlights that it is important to ensure that this program is seen as separate from Bank's AF and

that the communities are provided complete and transparent information on this program as being distinct from investments under Bank's program.

Assessment of Risks and Benefits

Environment

Of the various AF PforR activities, those pertaining to the shoreline management, coastal erosion protection and disaster recovery-related activities have environmental relevance. The summary findings of the risks and benefits are as follows:

Preparation of a Long-Term Shoreline Management Plan (SMP): This will assist in more informed decision-making on all aspects pertaining to the Kerala shoreline. This has the potential to bring major positive environmental benefits.

Pilot Investments in Select Hotspots and Highly Vulnerable Sites: These will be undertaken in the prevailing business-as-usual scenario that is threatening to damage life, livelihood and property. Once accomplished, these investments will bring major positive environmental benefits to the coastal communities, e.g. sea over-topping will be eliminated. During construction, these investments will result in temporary and reversible EHS impacts (air pollution, noise pollution and worker / community safety) that have residual environmental risks after adoption of proper management practices. In the operation phase, if the technical designs are not appropriate, there are likely to be negative environmental risks. The due diligence of the technical solutions – prior, during construction and post-construction oversight - will be important.

Disaster recovery-related activities related to critical river infrastructure: The removal of the debris, rock, boulders and stones due to landslides, and repairs / rehabilitation of the river embankments will have construction-related EHS impacts. These will be undertaken largely within the width of the river, which are under WRD's jurisdiction. These will not have major EHS impacts on community. However, worker health and safety impacts will have to be addressed through provisions management measures in the bid / contract documents to reduce the residual environmental risks.

Social

Some of the proposed investments under the AF PforR that may have important bearing on communities and people are shoreline management, coastal erosion protection and disaster recovery-related activities. The comprehensive identification of social risks has been done with the aim to ensure early identification and timely mitigation measures. The ESSA finds that though there is scope for bolstering the capacities of the implementing departments on social risk management, given the strong client commitment strong mitigation measures can be evolved in order to avoid, mitigate and manage all the identified social risks. Many proposed investments, especially Open Data Initiative and Climate Budget show clear potential to shift from a "do no harm or mitigation approach' to "enhancing and deepening gender and inclusion impacts".

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The summary findings of the risks and benefits are as follows:

Preparation of a Long-Term Shoreline Management Plan (SMP). Aimed at enhancing the government’s informed decision making for coastal and shoreline management, this activity has potential to bring major social benefits to the most vulnerable populations along the coastline. However, there are potential social risks such as exclusion of the voice and perspectives of the vulnerable groups, especially fisher-folk, women, SC/ST, migrant workers and persons with disabilities from the planning processes. If the concerns of the affected communities and vulnerable groups are not properly addressed, this process can have major short, medium and long-term impacts many of which could be also irreversible in nature.

There is national and global evidence to suggest that women’s deep connection and dependence on the coastal ecosystem is undervalued and un-recognized and therefore their voices may be missed out even during consultations. It is therefore recommended that the SMP development process is highly inclusive, consultative and also focuses at community led initiatives, along with the technical and infrastructure based solutions. SMP presents an opportunity to support the development process for the key socially excluded groups and women on shoreline protection and management. This will also ensure their greater buy-in, support as well as leadership on various medium and long-term solutions that have lasting positive social and environmental benefits. To achieve these objectives, a comprehensive Social Inclusion and Gender Assessment is strongly recommended to be a part of SMP.

Pilot Investments in Select Hotspots and Highly Vulnerable Sites.

The pilot investments under AF are envisaged to protect affected communities against severe situations such as flooding and sea attacks that threaten their lives and livelihoods. Field consultations and visits confirm the critical situation confronting the coastal communities, more so the vulnerable groups such as women, SC/ST, PWD. However, there are potential construction related social risks such as affecting the access of these fisher-folk to the sea which can impact their livelihoods. With inadequate and in many cases diminishing returns from small-scale fishing, these temporary impacts may actually cause more irreversible changes in terms of livelihoods and put these families at risk of poverty and indebtedness. The construction works envisaged can likely lead to temporary relocation of households which are in close proximity to coast and river basin area. Moreover, temporary relocation of the communities to shelter homes due to the flooding as well as during the construction of coastal protection infrastructure also has potential social risks,

Key Social Risks

- Risk of exclusion of the perspectives of affected community, especially vulnerable groups, women, elderly, persons with disabilities in the processes for shoreline and river management planning.
- Restrictions or barriers to access to the water sources (rivers, tributaries and irrigation channels) for the dependent communities, especially the elderly, infirm, persons with disabilities and pilgrims
- Restrictions on traditional access to the sea and its resources for fisher-folks, vendors, fishing communities, coastal villages owing to the construction of sea walls and its
- Temporary impacts on livelihood activities leading to loss of wages
- Temporary relocation of affected communities to relief shelters for long duration which compromise on their health, livelihoods and safety
- Exposure of women to Gender Based Violence due to labour influx
- Potential social risks for workers with regards to their health, sanitation and safety, including GBV/SEA
- Though a low risk as social screening is being proposed, perceived or actual unequal benefits from the subprojects to between various groups within the affected community can lead to intra-community conflict and/or conflict between construction workers and the community

such as lack of provision of basic amenities especially to women, exclusion of vulnerable groups, safety of women, lack of separate toilets to women etc. Since there are construction activities involved, there is possibility of labour influx, especially that of migrant labour. This can lead to issues related to the use of local resources by migrant labour or interference with the local community leading to conflict with the community. Other issues could be securing labour rights related to minimum wage rate, safety at construction sites and provision of basic facilities to labours and their families during construction. Labour Management Plan will be prepared for each sub project involving migrant labours and will be monitored during the implementation stage. One of the most common concerns emerging from labour influx is the potential exposure of women in host communities to gender based violence. Though a low risk, since the project will have significant perceived or actual unequal benefits from the subprojects to between various groups within the affected community can lead to intra-community conflict and/or conflict between construction workers and the community.

Currently, there are variations in how the relief efforts are undertaken across the state. Community consultations have highlighted certain districts and villages where community is dissatisfied with the relief efforts of their Panchayats and the State and have pointed to key gaps such as not factoring in even the basic needs of women, children, elderly in selecting the shelter sites or the movement from homes to these shelters and the moving back from relief shelters to homes. For instance, a clear gap was that on return the families found their homes to be in condition to live. Women's work in cleaning and ensuring the houses are clean and habitable increased manifold. Thus, it is imperative for ensuring proper site-specific documentation of all these risks and ensuring adequate staff and establishment of institutional mechanisms to evolve mitigation measures and their routine monitoring and reporting. Therefore, a temporary relocation and relief framework as part of the Shoreline Management Plan and separate site-specific temporary relocation and relief plans would be needed to be prepared by the contractors. This will require community involvement in identification of a safe, women-friendly relief shelter and its oversight, all provision of food and other basic amenities, sanitation.

Disaster recovery-related activities related to critical river infrastructure. The river embankment works are targeted towards reducing the river erosion and flooding that impacts several vulnerable groups live in the river basin and are entirely dependent on the rivers for their livelihoods and therefore envisage significant social benefits. However, there are likely temporary social impacts on fisher-folk community and those practising agriculture/paddy cultivation such as restriction on access, loss of wages for agricultural labour, who are mostly women and labour influx related concerns. As recommended above, contractors will need to adhere to provisions included in the bid/contract documents for labour management and safety, including ensuring mechanisms to address Gender Based Violence related concerns.

Open Data Initiative. The Open Data Initiative is expected to address key social risks and gap currently faced both by the affected communities, especially vulnerable groups such as women, SC/ST, small-holder fisher households and state's systems. However, there is possibility of some of these gaps remaining unaddressed if i) if there are no gender and social inclusion considerations in designing/selecting channels to relay and communicate the information ii) no effort to provide gender-specific information so that there is greater relevance and use by women and other vulnerable groups iii) if there continues to be gap in gender-related information being gathered such as building knowledge on how climate change impacts women, what is their current access to such weather

forecasting and warnings, what gaps do they face in accessing relevant information and what more information and support they need.

Climate Budget. This proposed initiative is likely to have significant positive impacts for vulnerable communities such as women, SC/ST, fisher folk and other coastal communities who are facing severe and adverse climate related social impacts affecting their health, safety, land and property and livelihoods. If the budget preparation process is not informed by social and gender considerations, the sectors and interventions which are crucially needed by the vulnerable communities can get missed out. Moreover budgets for interventions that are narrowly defined towards infrastructure or technical solutions only, may again have unintended social risks and impacts. Therefore it is crucial for the budget planning process to be gender and social inclusion informed. This initiative has the potential to move beyond a 'risk mitigation' to "enhanced gender and inclusion impacts'

Other associated social risks from ongoing resettlement and rehabilitation efforts of the State and other donors. In particular, the State's LIFE Mission offers a housing scheme for people staying in outlying, coastal and plantation areas or in temporary housing. Alternatively, it offers a fixed sum of Rs 10 lakhs to beneficiaries who do not want to stay in the housing complexes constructed under the Mission. While this is a good effort of the government, there is reluctance among the communities to relocate as they will lose the easy access to the sea and this directly impacts their livelihoods. It is understood that ADB is also planning to support the State and will be looking at more critical sites and hotspots for coastal protection works and likely will involve large-scale construction activities. It will be therefore important to ensure that activities under the AF, are not leading to any involuntary resettlement and relocation of the people as this could bring in some reputational risks to the Bank. Given the long-standing relationship of World Bank with GoK, there can be efforts to ensure that that concerns of the communities are properly addressed in the overall program of the Government to relocate fishing communities.

Institutional Capacity Assessment

Environment

Overall, the various GoK implementing departments / agencies have the basic capacity to address the environmental risks and to facilitate environmental benefits. At the Program-level, the institutional assessment revealed that the environmental capacity of the implementing departments / agencies will have to be further enhanced:

WRD, HED and associated agencies for coastal protection activities: These departments / agencies do not have an environmental cell or division but their engineers are given the responsibility of ensuring compliance to environmental regulations. The assessment revealed that there is a need to strengthen the capacity of engineers who have the responsibility of managing such activities. The competence-building should be both on compliance procedures and on good EHS practices. This is required to be done through the RKI Secretariat.

WRD for disaster-recovery in river stretches: The WRD engineers have the capacity to oversee contractors, whose contract will include EHS provisions. Further orientation and refreshing training to the assigned WRD engineers needs to be planned to ensure that the residual environmental risks are minimal.

RKI Secretariat: There is a fulltime officer (through their Project Management Support Services), who is responsible for coordinating the environmental management activities pertaining to the parent PforR. Additional capacity will be needed to support and coordinate both the shoreline management plan and coastal protection activities. In particular, the capacity will be required for oversight to ensure compliance to the CRZ and environmental clearances & conditions. This will necessarily include administering an environmental screening checklist prior to design & planning and prior to execution of works; and regular monitoring & reporting. This proposed Coastal Mission Directorate that will be staffed through the RKI Secretariat will include this oversight function.

Social

At the Program-level, the institutional assessment has revealed gaps in the existing social capacities of the departments / agencies. Some of the highlights of the assessment are:

Water Resources Department: The WRD is one of the primary implementing agencies. It has previous experience of working on World Bank projects and is familiar with some of the Bank's social safeguard requirements. However, WRD within its organizational structure does not have a social cell or division, nor any designated staff responsibilities to oversee and manage social and gender risks. The ESSA considers this to be a major institutional gap, since the proposed investments under the AF are likely to have some major social impacts. Most of these impacts are likely to be manageable through timely and well-informed mitigation measures that factor in site specific contexts (some sites may have greater risks due to a larger number of households along the coast, more vulnerable/women headed households etc). The assessment revealed that there is a need to strengthen the capacity of engineers who have the direct interface with the communities in the coastal areas and also proposing for additional deputation of staff/consultants. Thus, ESSA therefore, recommends a strong social and gender orientation for the relevant field staff of WRD and additionally, recommends the hiring of a special cadre of Social Officers for all nine coastal districts. The site visits revealed the fragile conditions of vulnerable groups and households, especially those in close proximity the coast and rivers. To garner community support and to ensure their concerns are duly addressed, this cadre is likely to play a critical role. The RKI Secretariat can provide initial capacity building and orientation support and ensure regular collection of data for social monitoring.

Harbour Engineering Department: Under the AF, it is proposed to engage the HED in some of the proposed activities. The HED focuses on creating infrastructure that has direct and key benefits for the community. In its outreach to the community, it works closely with the staff of the Fisheries and Ports Department. The consultation with the HED teams showed that they have greater focus on 'infrastructure' rather than providing communities with livelihood related support and this partly responsible for limited direct interface with the community and limited understanding of their needs and demands. The ESSA proposes that in order to ensure a more sustained focus on community's social

and gender related needs, the department needs to nominate its staff or engage few social consultants who can strengthen its interface with the coastal communities. Site visits to some of the fish auction grounds also revealed the critical need to re-vamp these in order to make them more customer friendly and safe for women. For instance, a significant concern, both environmental and social in nature, is lack of sanitation and waste disposal near the coast. Increasingly, harbors are dumping grounds for plastic and solid waste, as nearby communities do not have any options. While this is a challenge for the whole State, this can be one of the priority areas for HED to factor in its infrastructure development plans. A cadre with necessary social skills will be able to ensure such community needs are recognized and incorporated in the future plans and programs of the HED. A Gender Based Violence Mitigation Plan needs to be evolved with Bank's support to ensure there are specific measures to ensure these auction grounds and harbor areas are safe for women. Measures such as ensuring adequate lighting, separate toilets, display of zero tolerance on violence against women, display of State's or NGO operated helplines to report instances of violence can be placed. World Bank has secured trust funds to implement a GBV pilot and will be used to ensure GBV mitigation measures are evolved and implemented in all project sites.

Fisheries and Ports: While it is not a direct implementing agency, the Fisheries department has strong community interface and therefore possesses knowledge about key social risks and challenges faced by the affected communities due to coastal and river erosion. There is also a strong understanding within the department on the various ways in which the impact of climate change is being felt on livelihoods of fishing communities. Since the HED comes under the Fisheries Department, the real demands of the community are somewhat reflected in the type of infrastructure initiatives which are taken up by the HED. The ESSA recommends that for Shoreline Management Planning, a regular engagement of the Fisheries is ensured if long term positive social impacts are to be envisaged. Though not as robust in terms of their reach and social objectives, the 'Theeramythri' women's groups under the Society For Assistance to Fisherwomen (SAF) that was founded as part of the Fisheries department's outreach to fisher women, provide potential CBOs to integrate community-based solutions to coastal protection and management. The department has expressed a willingness to oversee/support a strong social and gender assessment for the purpose of shoreline management plan that looks beyond technical solutions and incorporates the concerns of the communities, looks at community based solutions for coastal management and and their livelihood.

RKI Secretariat: The RKI is in the process of recruiting a full-time Social Officer (through their Project Management Support Services), to focus on integrating social and gender concerns in the parent PforR's program activities. There has been a delay in the hiring of the officer and this has affected the initiation of activities that were proposed under the PAPs of the original ESSA. Based on this, the ESSA finds the current capacity of RKI to be limited in ensuring existing project work, but more so taking on the additional responsibilities that may emerge from the AF. Thus, it is recommended that RKI strengthen its existing capacity through increasing the number of social and gender staff/consultants to be able to provide timely and ongoing support to participating departments/Coastal Directorate and their nominated staff for addressing social risks and implementing mitigation measures. These increased capacities, both in terms of skills on social inclusion and gender and number of dedicated staff are required to ensure

coastal protection and shoreline management planning processes are truly inclusive of all socially vulnerable groups and women.

DRAFT

<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects</p>	<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>
<p>Environment</p>					
<p>Both the regulatory systems and the organizational systems were examined vis-à-vis the Core principle. The Gol / GoK's framework (laws and regulations) - environmental, forests and pollution control acts and rules - were assessed and found to be adequate to manage the environmental effects of the activities under the AF PforR. Of the various</p>	<p>The Gol / GoK's regulatory systems pertaining to natural habitats, particularly coastal zones, wetlands and forests were assessed and found to be adequate to manage the adverse environmental effects if these arise during implementation. The forest clearance for</p>	<p>The regulatory systems include the Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998. The Act and Rules mandate health and safety compliance for all civil works, and is regulated by the Labour Commissionerate. While</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>

<p>legislation, it is the EIA Notification and the Coastal Regulation Zone Notification 2011 that are relevant to the coastal protection investments being planned. The Department of Environment has established the SEIAA and the SEAC to review projects under the EIA Notification. The Department has also established the KCZMA to review projects under the CRZ Notification. These systems are adequate to ensure that the legal compliance is ensured at the state level. These regulations require projects, particularly those pertaining to coastal protection investments, to be forwarded to the central ministry / MoEFCC. At the centre, there are adequate systems to ensure to review against legal requirements and to prescribe conditions to adhere to those requirements during implementation. Outside of the coastal protection investments, the applicability of the GoI / GoK's legal is only to the activities in the river stretches. These activities</p>	<p>the diversion of forest land and compensatory afforestation, e.g. for tree cutting, are mandatory. Constructions in the proximity of cultural heritage sites such as protected monuments are also regulated. The AF PforR activities do not include any significant conversion or degradation of critical natural habitats or physical cultural heritage properties. In fact, many of the AF PforR activities will be done along the shoreline, which are not natural habitats of any significance. In the unlikely case of any such environmental effects, the respective Departments were found to be competent in addressing the regulatory requirements. The consistency to this principle was confirmed.</p>	<p>the systems are in place, the enforcement needs to be strengthened. Therefore, worker and public safety are generally managed through provisions in the bid / contract documents that the respective Departments - having civil works - will be using to procure its contractors. The provisions will be made part of agreements with contractors and will be monitored. Given the prevailing Covid-19 pandemic situation, this should also include additional requirements of the use of PPEs (face masks), physical distancing and handwashing practices that may be required of the contractor and sub-contractor personnel. All of these have been included as PAP recommendations. With this further strengthening, consistency to this core principle was also ensured in the Program design.</p>			
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<p>have only low and moderate impacts, and hence not a focus of the legal framework. In relation to civil works, there are procedural requirements to make the contractor responsible for obtaining consents from the SPCB or permissions for tree-cutting, if any, from the Forest Department. The consistency with Core Principle #1 was confirmed.</p>					
<p>Social</p>					
<p>The sector institutions/ departments have low social capacities primarily owing to their technical focus and limited community interface. Given, that the AF will focus on both hard and soft solutions along the coast and river basin, some requiring fairly significant construction/embankment and repair works, these capacities need to be enhanced.</p> <p>The ESSA finds the potential risks to be ranging from moderate to substantial, and recommends the state level institutions/ systems to ensure engagement of additional staff/consultants and creation of clear insitutional mechanisms to</p>	<p>The operations under the AF will not support activities that may have an impact on the religious or cultural resources of communities.</p>	<p>Since the AF envisages physical works along the coast and river basins, there is need for increased supervision on complete adherence to and application of the regulatory systems for worker and labour management. Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998. In addition, it is proposed to include labour management and safety provisions in the bid / contract documents that the respective Departments - having civil works - for</p>	<p>The project will exclude investments that may lead to physical or economic displacement of communities or individuals.</p> <p>However, it is felt that to manage livelihood impacts triggered by project investments, additional measures will need to be adopted as current focus on these issues is found to be low. For sites where there is temporary relocation envisaged, social screening reports will form the basis of preparation of a comprehensive plan</p>	<p>The proposed investments are envisaged to have positive impacts on STs and also other vulnerable groups such as SC/Women, elderly and persons with disabilities. However, additional measures will be supported to ensure strong community support and consent on all coastal/river basin management measures. For this purpose, it is proposed that departments bolster their capacities and staffing or engage NGOs/CBOs to to capture people's needs</p>	<p>While water resources of the Pamba Basin are contested between governments of Kerala and Tamil Nadu (under litigation), program investments are aimed at improved resource utilisation and efficiency and are not creating additional demands on the water resources; hence are not likely to lead to or exacerbate social or resource conflicts / disputes.</p>

<p>assess and manage these social risks and impacts, ensure citizen's engagement and participatory approaches for shoreline/river basin planning and transparency through disclosures and information sharing.</p> <p>Although the state has an effective central level GRM, the ESSA finds that there is currently data on project-related grievances is not available or documented. This makes monitoring the effectiveness, accessibility and transparency of the GRM difficult. Thus is is proposed a project-level is established GRM to ensure a more efficient redress of complaints.</p>		<p>procurement of contractors. The provisions will be made part of agreements with contractors and will be monitored. This will include establishment of a grievance mechanism for workers, including on protection against Gender Based Violence and Sexual Exploitation and Abuse.</p>	<p>to ensure that specific mitigation measures are evolved. Importantly, in sites where temporary livelihood impacts are envisaged, it is proposed that specific efforts are made to ensure that all the key safety net programs and assistance are accessed by the affected communities. Ensuring awareness on and linkages with programs supported by the Fisheries department through its Society for Assistance to Fisherwomen and the Matsyafed Federations under Kerala State Co-operative Federation for Fisheries Development will ensure there is some livelihood opportunities tapped for affected communities.</p>	<p>and include them in the basin level plans.</p> <p>State systems & established practices are expected to ensure transparency and accountability in preparation of RBP and SMP.</p> <p>There is however risk of exclusion of the voices and perspectives of vulnerable fishing communities, including in land fishing communities, small and marginal farmers & women from RBP and SMP processes, which may lead to non-application of the principles of equity in the allocation decided for <i>inter se</i> distribution of basin level water resources or in identification of access points to sea/river when construction of sea walls or embankments takes place. Site-specific mitigation measures will ensure these adverse impacts are avoided.</p>	
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Key Inputs from Consultations

Environment

The key highlights from the different stakeholder departments / agencies / experts consultations were as follows:

Stakeholder Type	Feedback - Highlights
Implementing agencies / departments	All technical designs are developed with the guidance of expert agencies such as NCCR or IIT Madras. Once developed, these agencies verify that the specific designs are in line with their guidance. There is a shortage of armour stones and this has necessitated the use of tetrapods. Nature-based solutions such as use casuarina, fruit-bearing trees and mangroves are possible in certain stretches but not in all.
Experts / Advisers	Comprehensive shoreline management is very much required. Given the changes along the shoreline, it is required to be kept upto date. It is important to get the institutional mechanisms for implementation upfront than to produce another technical report that does not get used.
Regulatory Agencies	For all shoreline interventions, regulatory clearances are required either at the state-level (KCZMA) and at the central-level (MoEFCC). Implementing departments / agencies should consult the DoECC / KCZMA as all regulatory clearances are routed through this Department / Authority
Consulting firms	Local people understand the sea better, particularly climate change impacts; they have to be consulted or involved in the developing the technical designs prepared with the support of the expert agencies. As per the CRZ clearance, 6-monthly compliance reports are required. These monitoring reports must be prepared. Corrective and preventive action should be taken in accordance.

The key highlights from KILA's community consultations were as follows:

Sector	Feedback - Highlights
<i>Shoreline management</i>	
5 Coastal Districts: Alappuzha, Kasargod, Kozhikode, Malapuram & Thrissur	<u>Issues / Problems</u> Sea turbulence and high tides during the monsoon season, low water quality due to salinity (sea water intrusion), flooding, non-scientific harbour construction and illegal sand mining <u>Solutions:</u> sea wall barrier using stones and earthen material, Sand-filled bags
<i>Disaster recovery in river stretches</i>	
Meenachal and Manimala river	<u>Issues / Problems:</u> Landslides, degradation of agriculture land, erosion washes the fertile topsoil, reduced agricultural

Sector	Feedback - Highlights
basins (Kottayam, Alappuzha & Pathanamthitta)	productivity, overexploitation of water resources, reduction in fish stocks, disruption of river water flows and sand mining <u>Solutions:</u> Increasing the depth and width of the river, waste management, clean ditches and streams before monsoon, constructing protective walls, and planting mangroves where feasible

The key environmental system issues identified during the consultations have been integrated with the AF PforR design, e.g. the institutional mechanism for implementation is being established ahead of PforR. The environmental issues raised by the community will be addressed as a part of the shoreline management plan as well as the coastal protection activities. In fact, the coastal protection activities pertain directly to addressing the environmental issues raised, e.g. sea level rise, over-topping of sea water and coastal flooding. Wherever feasible, the use of nature-based solutions or hybrid solutions (mix of nature-based and physical infrastructure and beach nourishment) will be undertaken. GoK has engaged expert agencies such as the National Centre for Coastal Research (NCCR), Chennai and Indian Institute of Technology (IIT) Madras to guide the implementing agencies / departments / organizations and confirm the appropriateness of the technical solutions using location-specific research and analysis. The technical solutions will necessarily be based on the various scientific studies related to the shoreline dynamics.

Social

Stakeholder Departments

The key highlights from the different stakeholder departments / agencies / experts consultations were as follows:

- **Coastal protection measures such as construction of sea walls are the urgent demand of the community and currently a technically sound option.** The consultations with WRD reflect the urgent need to implement some coastal protection infrastructural solutions for tackling coastal erosion and the impact of flooding and sea attacks on affected communities. Although, site visits and interactions with communities confirm this demand, it was also felt that since the increased concerns are being faced more recently, there is limited knowledge of any other alternatives that can provide effective protection. Therefore, it would be useful to explore the community-led nature-based solutions along with the construction of sea walls etc.
- **There is strong oversight of Panchayats on all works at the site level, and this helps ensure community's needs and demands are integrated.** However, there is still a need to evolve a system to ensure greater community participation and support. The consultations with key departments, WRD, HED, KSCADC, KSDMA and Fisheries highlighted that though there is strong local self-governance system in the state, there is still scope for greater engagement and participation of the communities especially the vulnerable groups such as ST/ SC population, women, disabled etc. The process of temporary relocation of the communities to relief shelters during flooding is also

managed by the Panchayats and there is careful consideration to ensure that help reaches communities in a timely manner. However, there is lack of vibrant CBOs in the coastal areas which could help communities engage and have a greater sense of ownership over the proposed project activities. The establishment of Community-Based Organisations specifically to focus on coastal protection/river basin management can be explored by the implementing agencies.

- **Coastal management, needs to be seen as beyond just technical and hard solutions.** It must be seen as a longer-term and sustainable solution to coastal erosion and strengthening of the marine ecosystem. This emphasis came strongly from consultations with HED and Fisheries. Since the livelihoods of affected communities is directly associated with access to sea/river, until and unless these concerns are factored into the planning for coastal protection and shoreline management, there will likely be resistance from communities if certain measures impact their access to water sources. It is important to mix nature-based solutions with the construction of sea walls and other infrastructure for coastal protection to ensure its sustainability and greater benefits for the affected communities.. The Bank needs to ensure it explores all options based on national and global good practices.

There is need for greater focus on social and gender issues integration in existing interventions on coastal protection and coastal and river basin management. The consultations also highlight the acknowledgement on behalf of the implementing agencies on the lack of adequate social skills and staff to be able to address potential social risks identified and mitigation measures evolved. It is important to envisage issues such as increased pressure on women and vulnerable groups, such as gender-based violence. Since the departments are under equipped to address these risks, there need to strengthen the capacity of the PMU/secretariat that will be proposed to implement the project.

Key highlights from Community Consultations

There is urgent need for coastal protection measures, but also for longer-term solutions for climate change adaptation. The community is able to recognise both immediate protection measures but also the need for climate change adaptation. For them, the impact of climate change is evident in the reduced supply and quality of fish stock. This is impacting the livelihoods of several vulnerable households and women. This is likely to lead to a situation where there will be increased poverty, indebtedness and compromises by women and girls to ensure food security of their families.

Lack of access to drinking water and sanitation facilities is both a health and a social hazard. There is increased pressure on women to find ways to dispose solid waste and garbage. Moreover, coasts and harbours are being used to dump solid waste and plastic waste and this is endangering the marine ecosystem. While this puts all affected communities at risk, it is felt that women and children are likely to face the brunt of this in terms of their health. The lack of drinking water is also posing increased health risks and increasing the drudgery of women as they are seen as responsible for ensuring drinking water for their families.

There is wide variation in how efficient and timely the relief efforts of the state and Panchayats are. Some sites complain of very poorly conceived and coordinated relief measures. Many poor and marginalized families lost their life savings and assets due to flood with improper shelter put in place. The rehabilitation was not completed during the flood. The impact of the flood was more on women in the region because the recouping mechanisms of the households were largely dependent on them. Loss in income and livelihood was also a major challenge during the flood.

Increased drudgery and invisibility of women's work: Existing data as well as observations data reiterate the differential impacts of coastal erosion and climate change on women and girls. For one, a most obvious impact in sites where there is flooding/frequent sea attacks is on their increased workload and drudgery during times of flooding, relocation and re-entry into their homes after their stay in relief shelters. The cultural roles and responsibilities ascribe household work, catering for food and water and other necessities on women. Even though there were existing state mechanisms to provide food and shelter, the intra-household allocation of the provisions often led to compromise from the women in the households. Some medium and long terms impacts point to the complete 'invisibilisation' of women's economic roles. Women who were also allied fishery sector workers on the coast are at times completely out of work during flooding. Climate change has meant dwindling fish stock and gradually the impacts of this percolates to women's roles and incomes thereof in fishery. Moreover, there is emerging data to point to increased possibility of women's and girls' exposure to domestic violence, violence in public spaces due to labour influx and during their stay in relief shelters.



There are bigger players who have hegemony over the access to fish and other marine resources, with small fisher -folk at the brink of losing their livelihoods. In particular there is diminishing role and returns from fishing related activities of women. The community consultations pointed to how the use of mechanised fishing vessels and over exploitation of marine resources by bigger fishing companies is threatening the ecosystem and reducing the access of individual fisher-folk/households to these resources. Some of the site visits showed that some fisher-folk have now been forced to become 'coolies' or porters or take to unskilled labour working for petty wages for bigger companies or more influential fishermen.

Other issues such as illegal sand mining is causing great damage to the marine and river ecosystems, but there have not been enough measures to tackle this. This issue was highlighted in few of the community consultations undertaken by KILA and point out that despite guidelines and litigations. The key departments and large public and private sector companies need to ensure that guidelines for sustainable mining are strictly adhered to. However, the community also felt that this is a larger issue that is beyond their control or that of their Panchayats.

Disclosure

The draft ESSA Addendum reports – this draft ESSA Addendum Summary Report and the draft ESSA Addendum Consolidated Report will be disclosed around April 25, 2022 on the RKI website. This disclosure will be the English version. The draft ESSA Summary Report will be translated in the local language - Malayalam – and will be disclosed around April 25, 2022 on the RKI website. Comments, suggestions and any other feedback will be requested along with this website disclosure.

All of these disclosures will be ahead of the state-level stakeholder workshop proposed for the week of May 9 2022. As part of the invitation to the workshop, the invitees will be sent the draft ESSA Addendum Summary Report for their prior reading and this will also constitute disclosure. The feedback obtained during the workshop will be used to further refine and finalize the draft ESSA Addendum reports. Once final, the ESSA Addendum reports will be disclosed on the RKI website and also the World Bank website. Printed copies of the ESSA reports will be made available upon request at the RKI office.

Recommendations and Actions / Exclusions

Environment

The following table includes the list of activities to be undertaken towards environmental systems strengthening in the context of the AF PforR activities:

No.	Institution / agency	Description	Timeline	Indicator for completion
E1	WRD, HED and agencies	Assigning responsibilities on environmental management to specific Assistant Executive Engineers and Assistant Engineers	6 months from project effectiveness	Evidence of responsibility assignment
E2	RKI Secretariat	Strengthening of the Environmental Team to support Coastal Mission Directorate and the additional coordination activities.	6 months from project effectiveness	Evidence of responsibility assignment
E3	RKI Secretariat / WRD / HED / Implementing agencies / Department of Environment	Finalizing the draft environmental screening checklist and criteria for inclusion under the AF PforR	3 months from project effectiveness	Evidence of the final environmental screening checklist and criteria

No.	Institution / agency	Description	Timeline	Indicator for completion
E4	RKI Secretariat	Developing the Terms of Reference (ToR) for conducting the EIA (emphasizing on consultations and disclosure) and preparing ESMPs for the coastal protection works Developing EHS guidelines for the disaster-related recovery activities along the river stretches.	6 months from project effectiveness	Evidence of the ToR and EHS Guidelines.
E5	RKI Secretariat	Developing relevant environmental content in the training and capacity building pertaining to coastal protection activities and shoreline management. Conduct such training for mainstreaming environmental considerations.	Throughout the project period (Orientation + Refresher)	Evidence of training conducted that includes environmental content
E6	RKI Secretariat & DoECC	Facilitating a regular dialogue between the DoECC and the WRD, HED and associated agencies to enable a two-way capacity-building on coastal erosion, protection and shoreline management issues.	Throughout the project period	Evidence of the periodic meetings facilitating the dialogue, discussions and field visits
E7	RKI Secretariat	Monitor and report the progress on environmental performance of the AF PforR activities as a part of the overall reporting	Quarterly and throughout the project period	Evidence of the periodic reports

Social

Coastal erosion and climate change require strong technical and scientific solutions. And yet, what will make these solutions work are strong systems, institutions and the people who are at the very helm of impacts of climate change and natural disasters. With high levels of literacy, awareness and the strongest local self-governance institutions, Kerala can be a strong example of inclusive solutions to coastal protection programs and climate change adaptation. The recommendations have been made keeping in mind the immediate requirements of the project which need to ensure that all social risks are identified and mitigated, but are also aimed at supporting the longer-term activities such

as shoreline management plan which allow greater scope for enhancing gender and social inclusion impacts for the most vulnerable communities. In sync with the overall parent PforR and AF to strengthen state's systems and capacities, the recommendations focus on building strong institutional mechanisms and capacities of the implementing departments to assess and manage social risks and enhance social/gender impacts.

No.	Institution / agency	Description	Timeline	Indicator for completion
S1	WRD	Appointment of Social Officers across all districts	6 months from project effectiveness	Recruitment of Social Officers
S2	HED	Nominate staff for additional social and gender responsibilities/or engage social and gender consultants	6 months from project effectiveness	Staff nominated for additional focus on social and gender concerns reflected in Job Descriptions
S3	RKI Secretariat	Strengthening of the Social Team to include 1-2 more social officers/consultants to support Coastal Mission Directorate and the additional coordination activities.	3 months from project effectiveness	All social officers are recruited with clear job descriptions
S4	RKI Secretariat / WRD / HED / Implementing agencies	Finalizing the draft social screening checklist and criteria for inclusion under the AF PfoR	3 months from project effectiveness	Social screening checklist and criteria are finalized
		Prepare social screening reports for each site before commencement of works	6 months (to be done prior to commencement of works)	Site-specific social screening reports are prepared to ensure no site requiring land acquisition/ and physical displacement of affected persons is selected
S5	RKI Secretariat / WRD / HED / Implementing agencies	Consolidate all social screening reports to prepare a comprehensive Social Risk Assessment and Management Report	6-12 months	Consolidated Social Assessment and Enhancing Social Impact Report

No.	Institution / agency	Description	Timeline	Indicator for completion
S6	RKI/WRD/HED	<p>Prepare a Relocation and Livelihood Restoration Plan for sites with expected temporary impacts</p> <p>(For temporary relocation, emphasis on A focus will be to ensure access to all safety net programs and linkages to specific livelihood programs of departments/Civil Society Organizations)</p>	6 months	Relocation and Restoration Plans are prepared for sites where relocation and livelihood impacts are expected
S7	RKI Secretariat	Clearly define a project level Grievance Redressal Mechanism with clearly established linkages with existing central and state mechanisms to ensure routine logging of project-related grievances and redressal process and timelines	6 months from project effectiveness	<p>Grievance Mechanism is established and linkages developed with the state level GRM</p> <p>Quarterly report on grievances received and redressed are being prepared</p>
S8	WRD/HED	<p>Strengthen or establish Community Based Organisations for oversight and community participation in coastal protection works and shoreline management</p> <p><i>(Where existing CBOs are there, eg Water User Associations under WRD, or women's groups such as Theeramythri groups, this can be a reassessment of their existing focus, organizational maturity)</i></p>	Can be tried on a pilot basis in select sites	To be evolved as a good practice on inclusive and participate SMP with support from World Bank

No.	Institution / agency	Description	Timeline	Indicator for completion
S9	RKI Secretariat with support of WCD and NGOs	Gender Based Violence Mitigation Plan to avoid instances of GBV and also ensure redressal mechanisms for reporting Sexual Exploitation and Abuse/Sexual Harassment issues (Trust funds for a pilot will input into this GBV Mitigation Plan)	Within one year of project commencement	GBV/SEA Mitigation Plan
S10	RKI Secretariat	Continue from Parent PforR the development of social and gender modules for training and orientation of social staff in participating departments	Throughout the project period (Orientation + Refresher)	Training modules prepared incorporating good practices on social and gender risk mitigation
S11	RKI Secretariat	Conduct a Social Inclusion and Gender Assessment for input into Shoreline Management Plan (a participatory and consultative assessment lead by subject matter experts/NGOs/research organization)	Year 2	Social Inclusion and Gender Assessment Report
S12	RKI Secretariat	Monitor and report the progress on social inclusion and gender performance of the AF PforR activities as a part of the overall reporting	Quarterly and throughout the project period	Quarterly Social Progress Reports
S13	RKI Secretariat	Prepare guidelines for all departments and stakeholders such as LSGD to re-affirm the need to ensure strict adherence to regulations on illegal sand mining and provide information on	Within 3 months	Letter/guideline issued

No.	Institution / agency	Description	Timeline	Indicator for completion
		reporting any such instances		

Program Exclusions

Environment

The assessment confirmed the activities are eligible for PforR financing. There are no potentially significant, adverse environmental impacts in the AF PforR. At the outset, activities that are severely affected are not proposed under the AF PforR. Further, during implementation there will be an environmental criteria administered to screen out those activities that are not to be included. Requirements of not being in the vicinity of any natural habitats or cultural heritage sites form a part of the criteria. And only those that obtain the required CRZ and environmental clearance will be supported under the AF PforR. There are no major workplace conditions prone to health and safety risks. And, no significant, cumulative, induced and indirect impacts.

Social

The following activities are proposed to be excluded from the current investments:

- Considering the nature of operations (PforR), any repair and maintenance works requiring land acquisition and large-scale physical resettlement of affected persons and removal of structures will be excluded from the list of investments.
- Sites where works require long periods of temporary relocation of affected communities should be avoided.
- Schools as sites of temporary relief shelters due to project-related constructions or repair works will not be permitted. (Due to recurring disasters/flooding, children's education has already suffered as schools have been the preferred sites to function as relief centres)

Program Actions and Implementation Support

Environment

The Bank's AF PforR focuses on institutional development by preparing a Shoreline Management Plan (SMP) and investment activities (coastal protection and disaster recovery of river stretches). Of these, the Bank's implementation support should focus largely on further building the environmental management capacity as a part of the preparation of the SMP. With regard to the investment activities, the Bank's implementation support should review and supervise (i) compliance to legal and regulatory requirements, (ii) contractual requirements and (iii) good EHS practices so that all construction-related environmental and social risks are effectively managed.

Social

The following PAPs are in continuation of PAPs under ESSA for parent PforR and include some additional PAPs.

Action Description	Source	DLI #	Responsibility	Timing and Tasks	Completion Measurement
Establishing an institutional structure for addressing social risks and mitigation measures under the AF	ESSA	NA	RKI/PMU and implementing institutions (WRD and HED)	<p>Year 1: Completion of recruitment and deployment, where required</p> <ul style="list-style-type: none"> • Preparation of ToRs for key social positions in RKI-PMU & other key sector institutions; capacity building modules finalized • Recruitment of Social Officers for 9 districts in WRD • HED to designate staff with additional responsibilities on social risk mitigation • Coastal Management Directorate to have a Senior Social and Gender Specialist and a cadre of Social and Gender Officers <p>Year 2 onwards: regular training of functionaries on different aspects of social management and gender.</p>	IVA

Action Description	Source	DLI #	Responsibility	Timing and Tasks	Completion Measurement
<p>Prepare a Social Assessment report using site specific social screening reports to define clearly all social risks that are likely to arise from proposed investments</p> <p>Relocation and Livelihood Restoration Plan for sites with temporary relocation and livelihood impacts are expected</p>	ESSA		RKI with WRD/HED/Coastal Management Directorate	<p>Year 1: Social Screening of all sites is completed and consolidated into a Social Assessment Report</p> <p>Year 1: Relocation and Livelihood Restoration Plans prepared for all sites where such impacts are expected as identified under social screening reports</p>	IVA
<p>Establish clear project level GRM to ensure logging of all project-specific grievances and their redressal actions.</p>	ESSA	NA	RKI and key departments for each sector	<p>Year 1: Define a level project GRM for GBV</p> <p>Regularly analyse and track grievances to inform the program based on assessment of existing systems & requirement for developing common GRM for RKP proposed under previous ESSA</p>	IVA, Aide Memoires

Action Description	Source	DLI #	Responsibility	Timing and Tasks	Completion Measurement
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Year 2 (end): A review/stock-take report to assess effective functioning of the GRM

DRAFT

1 State Context

The State of Kerala (the State) is highly vulnerable to natural disasters and the changing climatic dynamics given its location along the coast and steep gradient along the slopes of the Western Ghats. It is prone to a host of natural hazards such as cyclone, monsoon storm surge, coastal erosion, sea level rise, tsunami, flood, drought, lightning, landslide, land subsidence and earthquakes. Kerala's State Disaster Management Plan assesses 39 types of known and reported hazard types in the GoK that may turn disastrous in the event of lack of proper preparedness and risk reduction planning. With Cyclone Ockhi in 2017, floods and landslides in 2018, 2019 and 2020, and now the Covid-19 pandemic, Kerala has been experiencing major disaster events for four consecutive years. The 2018 flood — the worst in nearly a century — led to widespread loss of life, property, and habitats in Kerala, causing 498 casualties with over 5.4 million people affected with loss of assets and property and 1.4 million people displaced, not to leave out financial losses of approximately US\$ 3.74 billion (Rs. 26,720 crores). These events and their impacts highlighted the level of under-preparedness in the GoK to address natural disasters and climate change shocks.

The main vulnerabilities associated with the floods — emblematically — follow the course of the river, starting from the basins and reservoirs upstream, to the intense developments in the cities and towns midstream, through to farms and livelihoods downstream. Addressing the underlying drivers of floods and landslides and better preparing the GoK for future disasters, therefore, follows the course of the river: upstream, through integrated water resources and reservoir management; midstream, through improved land use planning and management, infrastructure and services; and downstream, through ecologically sound agriculture and irrigation practices. Addressing these require systemically building the capability of the GoK to carry out an integrated and coordinated set of policy, institutional and budgetary changes, over time. They demand political will, institutional capacities, public support, and a continuous and iterative change process. Recognizing this, the GoK sought to use the 2018 floods as “a challenge and an opportunity to rebuild the State to ensure better standards of living to all sections of the society.”

The State experienced the first confirmed cases of Covid-19 in India on January 30, 2020. High levels of urbanization and population density, tourist inflows, regular inward and outward travel of non-residents, and an aging population with co-morbidities made Kerala susceptible to infection and spread. The GoK responded proactively through a robust response plan at the early onset of the disease, based on learnings from the Nipah virus outbreak experience in 2018 and building on the institutional and policy actions carried out under the DPO 1. An initial spike of new Covid-19 cases occurred, beginning in late March, declining to zero daily cases by mid-May. A second spike occurred in mid-May, primarily due to returning expatriates and migrants from other States, as the lockdown eased. As of October 8, 2020, there have been 258,850 cases and 930 deaths. Of this, 167,256 (64.6 percent) cases have recovered. Although Kerala is one of the top three States in terms of new case rate and has a high test-positivity rate (14 percent vs. national average of 8 percent), its mortality rate (0.4) and transmission rate (1.55) are still on the lower side. To deal with the Covid-19 and other disease outbreaks in the future, the GoK needs to further strengthen its disease outbreak warning and response

systems and commence recovery from the current crisis amidst serious economic and fiscal constraints.

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2 Program Description

First Resilient Kerala Development Policy Operation. The World Bank (WB)'s support to GoK commenced in the immediate aftermath of the 2018 floods and landslides through a strategic engagement to build multidimensional resilience in Kerala. The foundation of the engagement was set by the First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million), approved in June 2019, supporting the Rebuild Kerala Development Programme (RKDP) — the GoK's strategic and integrated roadmap for recovery, rebuilding and resilience, developed with support from the Bank. The DPO 1 set the course for centering resilience-related policy and institutional reforms in key crosscutting areas and sectors of the economy. It supported GoK's efforts to improve fiscal sustainability through a variety of approaches, including levying a flood cess and mobilizing private finances via a masala bond. Key policy and institutional reforms were triggered in the water-agriculture nexus to engender holistic river basin management, shift agriculture to sustainable and climate-resilient models and strengthen agriculture value chains. Increased protections were afforded to human settlements by requiring risk-informed land use planning and updating disaster management plans at various levels. Reforms were also initiated to strengthen the resilience of critical infrastructure through multi-year capital planning, improved standards and mobilization of private sector expertise. Finally, a dedicated institutional modality, the Rebuild Kerala Initiative (RKI), was set up to coordinate, manage and monitor the roll out of the RKDP and the DPO 1 across various government departments and agencies, and with the civil society and the private sector. These efforts have improved the GoK's capacity to respond to disasters and other extreme events. In part, they allowed the GoK to tackle the 2019 and 2020 floods and landslides with much reduced loss of lives, assets and livelihoods.

Resilient Kerala Program PforR (RKP, P174778, US\$125 million) was approved on June 24, 2021, and became effective on September 9, 2021, to support and incentivize a transformational shift to build long-term and multidimensional resilience to climate change, natural disaster, and disease outbreaks in the State. With a program development objective (PDO) to 'enhance Kerala's resilience against the impacts of climate change and natural disasters, including disease outbreaks and pandemics,' the RKP aims to achieve the objectives through two Result Areas (RAs): (i) strengthening transversal systems for resilience, and (ii) embedding resilience in key socioeconomic sectors. The RKP results areas and activities have been prioritized based on three factors: (i) building on policy actions corresponding to the most critical challenges in resilience, (ii) synergies to implement an integrated model of dimensional resilience, and (iii) ownership and implementation readiness. The Program will be implemented over five years (FY2022–27), both at the State level and in the Pamba River Basin area, comprising of four districts, namely Alappuzha, Idukki, Kottayam, and Pathanamthitta. The US\$530 million PforR operation is financed by (i) US\$125 million IBRD loan; (ii) co-financing of US\$125 million by the AIIB which was approved on July 15, 2021 and declared effective on December 17, 2021; (iii) co-financing of €100 million (or about US\$120 million equivalent) by the AFD which was approved on December 16, 2021 and is pending loan signing and effectiveness; (iv) counterpart funding of US\$160 million from GoK; and (iv) €2 million technical assistance (TA) grant from KfW.

The State Partnership Framework. With deepened WB engagement in Kerala woven around the theme of multidimensional resilience, it has become imperative to move away

from the model of standalone sector projects. The SPF aims to provide a cohesive and strategic approach to the GoK-WB partnership in strengthening institutional, economic and social resilience of the State to the impacts of natural disasters and climate change. The Framework is founded on Government priorities and programs outlined in the RKDP and the 'Nava Keralam' (New Kerala) and supports the strategic priorities of the Bank's India Country Partnership Framework (CPF) as well as the Operational Framework for South Asia Region (SAR). Future Bank engagements in Kerala would be vetted against the framework of engagement. The SPF forms the basis for collaboration with development partners and civil society, as well to leverage resources across the WBG and to mobilize market-based resources to finance resilient development in the State. The SPF forms the basis for collaboration with development partners and civil society, as well as to leverage resources across the WBG and to mobilize market-based resources to finance resilient development in the State.

Looking into the future, the State Partnership Framework (SPF) will be advanced through multiple tracks: one, continuing support to calibrate and strengthen the State's transversal public administration and financing systems and institutions to prepare for and manage exogenous shocks effectively; two, deepening sectoral dimensions of resilience in critical sectors like agriculture, WRM and local infrastructure and services through sector specific programs; and, three, advancing knowledge partnerships at the institutional level and Lighthouse exchanges with peer States and other countries. The SBL will likely constrain the Bank from financing multiple and/or large state level operations in the near term. This will be overcome by the ability and track record of the partnership to leverage different sources of public and market-based finance. The experience of the Kerala SPF, DPO 1 and the proposed Resilient Kerala PforR will serve to strengthen other state partnerships as well as engender a new approach to multidimensional resilience across India.

Additional Financing PforR

While many sectors have deepened their dialogue to build multidimensional resilience with the GoK since the inception of the State Partnership in 2018, Kerala suffered additional shocks from out-of-normal rains, flooding, landslides, COVID-19, and sea erosion in 2019, 2020 and 2021. While the State has been able to tackle these shocks with greater degree of preparedness and, consequently, lesser human and economic losses, their cumulative impacts have been substantial and have necessitated accelerated efforts by GoK. Therefore, the GoK has initiated long term measures to address the root causes of flooding and landslides in Pamba Basin with short term actions to alleviate the impacts of successive floods during 2018-21, and to better prepare the most vulnerable areas for future. Similarly, to address the exacerbated coastal erosion, the GoK is now rolling out a long-term program of comprehensive coastal management, that includes long term planning and investments in infrastructure and nature-based solutions and strengthening institutional capacities. Simultaneously GoK also plans to address immediate needs for protection of coastal erosion.

In order to respond to the above situation, the PforR (hereinafter referred as the Parent PforR) is being broadened and deepened with additional financing (hereinafter referred as the Additional Financing (AF) PforR) through the inclusion of coastal zone resilience as a critical new focal area, integrating it with the multidimensional resilience efforts

under RKP, and by deepening efforts to mitigate the impacts of recurrent floods in the Pamba river basin. The AF PforR is critical at this moment to set up the appropriate upstream institutional arrangements, technical capacities, and systems for planning, budgeting and implementation and the Program will draw from the Bank's global experiences on integrated coastal zone management (ICZM) and best practices in knowledge sharing and management.

The proposed AF will add further depth to the relevance and scope of the State Partnership by adapting quickly and flexibly to the evolving needs of the State of Kerala on resilience. The AF will (i) respond to the profound and complex needs on coastal erosion by supporting the development of shoreline management plan (SMP) and financing critical initial investments to better protect vulnerable coastal zone hotspots; and (ii) add to the ongoing PforR by addressing the impacts and causes of the repeated floods, further advancing reservoir and basin management plans, strengthening institutional frameworks in the Pamba Basin, and supporting critical investments to alleviate the impacts and causes of damages from 2021 floods in the Pamba Basin; enabling a holistic "catchment to coast" approach to water resilience. The AF will also strengthen the integration of open data/disruptive technologies and climate budgeting into the Program to advance multidimensional resilience, both across transversal systems and, in particular, for WRM and coastal resilience.

The arc of development which started with multisector policy and institutional reforms under the First Resilient Kerala DPO has evolved into a multisector Program for Results, which is the parent Program, to the proposed AF. Moving along this development arc, the AF aims to further deepen resilience in Kerala in the critical areas of water resources management (WRM) and coastal resilience. The AF reinforces the goal of multidimensional resilience in the State by building on the foundation of the State Partnership and previous interventions, by being adaptive to evolving climate change and disaster needs of the State, and by espousing a balance between short to medium-term remedial actions to alleviate on-the-ground conditions precipitated by climatic events and long-term structural changes to address the root causes of climatic and disaster vulnerability.

New Activity on Strengthening Coastal Resilience. The proposed new DLI 10 under Results Area 2 aim to strengthen coastal resilience and management to sustainability protect, reduce vulnerability to erosion, environment and other hydro-meteorological hazards in the coast of Kerala by (i) improving coordination and strengthening the institutional capacity for sustainable shoreline management; (ii) preparing a long-term Shoreline Management Plan (combining policy options and technical solutions) for the entire coastal stretch based on the sediment cell concept; and (iii) pilot investments supporting a hybrid of hard and soft solutions in select districts along and adjacent to Pamba basin requiring urgent attention. The technical assessment of new activities on coastal resilience are detailed in Section IV. Appraisal Summary.

Enhancement of Water Resource Management in the Pamba river basin. The proposed new activities under DLI 7 would aim to address severely flood-prone regions and minimize losses in the future. The Program would aim to strengthen the WRD and equip the Integrated Command and Control Centre within WRD with innovative tools for flood management. Based on an assessment of recent flood-related damages, the need for

critical investments will be reassessed. Accordingly, investments under AF would target to minimize flood damages in the future while giving due consideration to environmental aspects. The potential activities may include (i) restoration of rivers by improving their carrying capacity; and (ii) restoration of lakes embankments; and (iii) roll out of critical remedial measures in flooding hotspots. These investments will be backed by hydraulic and structural assessments.

New Activity on Climate Budget Reform. The proposed new DLI 11 under Results Area 1 aim to strengthen a whole-of government approach to resilience by leveraging the State’s governance and public finance framework to enhance policy and institutional environment, through potential Climate Budget Tagging (CBT) exercise led by the Department of Finance.

New Activity on Strengthening Open Data. The proposed new activity will develop Diagnostics and a Roadmap for Open Data Initiative to Strengthen Climate and Disaster Resilience.

Table 1: Program Boundaries and Proposed Changes

Government program Rebuild Kerala Development Programme (RKDP)	Original PforR The Resilient Kerala PforR (the Program, RKP)	With AF (& restructuring)
Objective: To enable the GoK’s resilient recovery and catalyze transformational shift toward risk-informed socioeconomic development through supporting sustainable communities, institutions, livelihoods, and putting in place major infrastructure.	PDO: To enhance the GoK’s resilience against the impacts of climate change, natural disasters, and disease outbreaks.	PDO: no change from original PforR
Duration: 2019–2027	Duration: 2021–2026	Duration: 2021–2026
Geographic Coverage: Kerala	Geographic Coverage: Kerala (statewide) for development of institutions and systems (mainly within RA 1); focusing on districts along the Pamba Basin for demonstrating integrated resilience at local level (mainly within RA 2)	Geographic Coverage: - Kerala (statewide) for development of institutions and systems for coastal resilience (RA 2); - Focus on all coastal districts (including addition of two new districts (Kollam and Ernakulam))(RA2); - Focusing on districts along Pamba Basin (RA2)
Sectoral Coverage: Encompasses key sectors of the economy such as agriculture, animal husbandry, fisheries, forestry, land, livelihoods, roads, transportation, urban, water supply and sanitation, water resources management (WRM), and health emergencies; also addresses cross-cutting priorities: climate change, DRM, disaster risk financing and insurance (DRFI), environment, and open data.	Sectoral Coverage: - RA 1: Fiscal, DRFI, Social Protection, Urban, and DRM - RA 2: Health, Agriculture, WRM, and Roads	Sectoral Coverage: - RA2: WRM and Environment
Results Areas (RA): The RKDP aims to rebuild Kerala in a speedy and effective manner that ensures (a) higher standards of	RA: The two results areas are (a) strengthening transversal systems for resilience and (b) embedding resilience in key economic sectors	RA: The are no changes to the RAs

infrastructure, assets, and livelihoods for resilience against future disasters and (b) building individual, community, and institutional resilience to natural hazards while fostering equitable, inclusive, and participatory reconstruction that builds back better.		
Overall Financing: US\$1,701.65 million	Overall Financing: US\$530.00 million	Overall Financing: US\$150.00 million

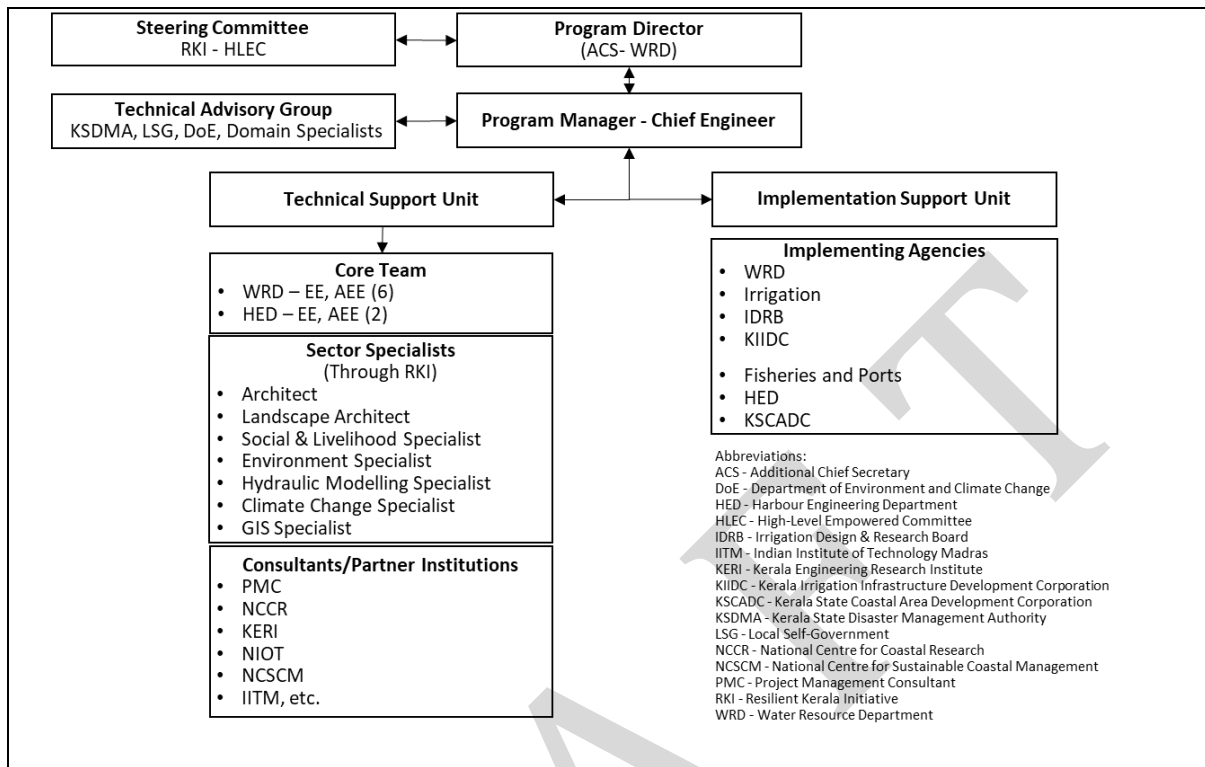
Table 2: Disbursement Linked Indicators

DLIs	Fund Recipient	RKP Financing (USD M)	AF Financing (USD M)
RA 1: Strengthening transversal systems for resilience			
DLI 1: Fiscal sustainability of GoK to cope with disease outbreaks and natural disasters is strengthened	DoF	24.38	0
DLI 2: Disaster-related adaptive safety net system of GoK is strengthened	DoF	25.00	0
DLI 3: DR Financing and insurance capacity of GoK and vulnerable households in Kerala are improved	DoF	35.00	0
DLI 4: Urban local bodies developed and sanctioned risk-informed urban MPs and priority action plans	LSGD	30.00	0
DLI 5: Climate risk information integrated into local body DRM plans	LSGD	65.00	0
DLI 11 (Newly added in AF): Climate Budget produced as part of GoK's annual state budget for ten key climate relevant sectors.	DoF	0	10.00
RA 2: Embedding resilience in key economic sectors			
DLI 6: Capacity to track & respond to zoonotic disease outbreaks of human importance in a timely manner	DoHFW	35.00	0
DLI 7: Integrated river basin management plan is developed for Pamba Basin and implementation commenced	WRD	35.00	50.00
DLI 8: Farmer producer organizations have increased access to new and organized markets	DOA	40.00	0
DLI 9: CRN is rehabilitated and/or maintained to meet resilient service standards in the Pamba Basin	PWD	80.00	0
DLI 10 (Newly added in AF): Long-term Shoreline Management Plan for the entire coastal stretch is developed and investments to protect coastal erosion in critical sites	WRD, HED, DoECC, other relevant organizations	N/A	90.00
Total:		370*	150

*Note: Includes IBRD, AIIB, and AFD financing. Does not include USD 160 million of counterpart financing from GoK.

Institutional and Implementation Arrangements. The proposed new activities on coastal resilience and taking a holistic “catchment to coast” approach to water resilience will bring in new stakeholders. In addition to the WRD – a line department of GoK, there will be new implementing agencies including (i) Harbour Engineering Department (HED) - a line department of GoK and (i) Kerala State Coastal Area Development Corporation Limited (KSCADC), Kerala Irrigation Infrastructure Development Corporation (KIIDCO) and Irrigation Design and Research Board (IDRB) - both state government-owned companies. WRD is already one of the implementing agencies under the Parent PforR. Bringing some or all of these additional agencies on board for the AF PforR will also support capacity building for holistic coastal resilience. The proposed institutional arrangement for the AF PforR are shown in the following figure.

Figure 1 Draft Institutional Arrangement for Coastal Resilience and Water Resource Management



3 Environment and Social Systems Assessment – Scope and Methodology

3.1 Scope of the ESSA

The proposed 'Resilient Kerala Program Additional Financing' will support critical actions in Pamba River Basin to address the impacts and causes of repeated floods, develop policies and plans, strengthen institutional frameworks, and finance investments in coastal zone resilience, and expand the geographical scope of the PforR in Pamba basin from four to six districts. Therefore, as per the PforR requirements, a shorter Environmental and Social Systems Assessment (ESSA) has been undertaken to support the design of the additional interventions. This will supplement the comprehensive ESSA undertaken for the parent PforR, wherein the borrower capacities and system performance that have already been assessed and well documented in the past. It will therefore highlight the systems of the new implementation agencies that are being envisaged for implanting the additional interventions.

This ESSA analyzes the state systems and the prevailing systems in the sectors where investments are planned under this operation to understand the extent to which the existing institutions, systems and capacities are aligned with the 6 core principles and their Key Planning Elements:

- Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts;
- Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program;
- Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and, (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards;
- Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards;
- Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups;
- Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

ESSA looks at the relevant policy-legal environment pertaining to social and environmental systems, the program implementation agencies, and their capacities to manage identified environmental and social impacts and risks associated with the Program. It also tries to understand the state/sector systems, procedures and strategies to ensure inclusion of various vulnerable groups in their regular planning and implementation roles and ensure equitable access to benefits. It also assesses the borrower's social management capacities – capability of various formal as well as support

institutions like executing and training agencies, Civil Society Organizations (CSO) and Community Based Organizations (CBOs) to collectively assure accountability and transparency, community participation and ownership, equity in provisioning services and also their ability to offer a systematic redress to grievances of citizens and users.

Methodology

The Environmental and Social Systems Assessment (ESSA) Addendum was prepared by a team of environmental and social specialists from the World Bank. The team examined the following in relation to the AF PforR: (i) the potential E&S effects (including direct, indirect, induced, and cumulative effects as relevant); (ii) the borrower's capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects; (iii) the comparison of the borrower's systems—laws, regulations, standards, procedures, and implementation performance—against the core principles and key planning elements to identify any significant differences between them that could affect Program performance; (iv) the likelihood that the proposed operation achieves its E&S objectives; and (v) recommendation of measures to address capacity for and performance on policy issues and specific operational aspects relevant to managing the AF PforR risks (e.g. carrying out Staff training, implementing institutional capacity-building programs, developing and adopting internal operational guidelines) through a Program Action Plan (PAP).

The ESSA Addendum was informed by a detailed review of secondary literature including applicable policies, Acts, Rules, Government Orders, Circulars, notifications and guidelines as well as evaluations (on institutional or scheme performance) websites, internal assessments, reports, studies. The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. This also included a review of the borrowers' systems for engaging with citizens, especially the most marginalized and excluded as well as their grievance redress. Apart from a desk review of available information, personal interviews and consultations were also held with the community and institutional stakeholders.

Owing to COVID-19 related mobility restrictions, Bank's ESSA team engaged Kerala Institute of Land Administration (KILA) to conduct community consultations. KILA used a checklist of questions - prepared by the Bank ESSA Social team - to guide these consultations in the coastal districts. The Bank ESSA team also anchored an orientation session for the district-level resource persons in KILA. As the consultations were done on a sample basis, KILA devised a methodology to select districts out of the total 9 coastal districts. A composite score was developed based on the share of a number of coastal LSGI in each district, percentage of coastal erosion, the share of a vulnerable population (census, 2011) and the Vulnerability Index. The composite score was calculated as the geometric mean of these individual indices with equal weights. Based on the cumulative sampling score, the five districts were selected: Thrissur, Kozhikode, Malappuram, Alappuzha and Kasaragod.

In the selected five districts, sampling of LSG (three per district) was done based on the vulnerable population share and the length of coastline eroded (high erosion to moderate erosion) using the same method used in the selection of districts. Due to the non-availability of data at the LSGI level, the climate vulnerability index was dropped in the

selection of LSGI. Along with three selected LSGI, one replacement LSGI / district was also selected considering the uncertainty from the COVID-19 pandemic. In all about 15 LSGI were selected for the community consultations along the coast. Further, consultations were conducted with communities pertaining to the Manimala and Meenachal river stretches. Two Focus Group Discussions (FGDs) per LSGI were conducted, one with women and particularly vulnerable groups, and the second was a general FGD. These FGDs were restricted to the coastal wards in each LSGI. A total of 42 FGDs were conducted. At district level 3 Key informant interviews (KIIs) were also carried out. Fisheries officers (at LSGI level) and other concerned administrative authorities / elected representatives in the district were also consulted. A total of 21 KIIs were conducted. The following table provides the breakdown.

	FGDs-No. & Type	FGDs	KII/district	KII
Coast	6/district	30	5	15
WRM	6/RB	12	2	6
Total		42		21

These consultations were held between January 2022 and March 2022. A summary of the KILA's consultation report is included verbatim Annex 4. The institutional stakeholder consultations were carried out by the Bank team largely through a virtual format. About 7 virtual meetings for social assessment and 10 virtual meetings for environmental assessment with the relevant stakeholders covering were undertaken.

3.2 Structure of ESSA

In terms of the structure, the ESSA attempts to do an initial risk screening of the proposed project activities to identify potential social impacts/ risks applicable to the Program interventions. Based on this it undertakes a detailed sector-wise assessment of risk and benefit of the program investments. It then reviews the applicable national and state policy and legal framework and its adequacy for the management of environmental and social impacts of the proposed interventions. Along with this it assesses the institutional capacity for environmental and social risk management within the borrower system, including their ability to specifically address/ handle risks flagged under the core principles of PforR and identify any key gaps in the Program's performance that need to be bridged/ mitigated. Along with the gaps identified against the Core Principles, inputs received from the stakeholder consultation process are used to assess the robustness of the program systems and the gaps therein. The risks emerging from this institutional assessment and the stakeholder consultations are then used to identify gaps in the sectoral systems and institutions and measures needed to address them. It goes on to recommend overall social actions needed to manage the risks as well as critical actions (Program Action Plans- PAPs). Along with the PAPs the report provides a brief roadmap for addressing these identified social risks and gaps, the timeframe within which these proposed actions need to be completed as well as the parties/ institutions to be responsible for getting those actions in place to avoid adverse impacts and to strengthen Program performance.

4 Key Risks and Impacts

Some of the proposed investments under the AF PforR, that may have important bearing on communities and people are shoreline management, coastal erosion protection and disaster recovery-related activities. The comprehensive identification of social risks has been done with the aim to ensure early identification and timely mitigation measures. The ESSA finds that though there is scope for bolstering the capacities of the implementing departments on social risk management, given the strong client commitment strong mitigation measures can be evolved in order to avoid, mitigate and manage all the identified social risks. Many proposed investments, especially Open Data Initiative and Climate Budget show clear potential to shift from a "do no harm or mitigation approach" to "enhancing and deepening gender and inclusion impacts".

4.1 Preparation of a Long-Term Shoreline Management Plan (SMP)

The SMP has the potential to bring major positive environmental benefits to the coastal areas of the state. By providing policy options for shoreline management, this plan will guide the GoK on coastal activities that are consistent with good practice in the wake of the ongoing climate change impacts. The plan will (i) incorporate the best available technical advice, (ii) be prepared in a consultative manner with all stakeholder inputs, (iii) is flexible and adaptable to changing circumstances, and (iv) have the full ownership of the GoK.

4.1.1 Environmental Benefits, Risks and Impacts

The pilot investments will address a dire environmental problem faced by the coastal communities particularly during the monsoon. Coastal erosion will be arrested. Sea over-topping will be eliminated. Salinity intrusion will be reduced. All of these will bring major positive environmental benefits to the community. But the investments include construction that will necessarily have EHS impacts such as air pollution, noise pollution and worker / community safety. As the scale of these investments are small, these impacts will be low to moderate. With the adoption of proper management measures during the construction phase, the negative environmental impacts will be addressed. If the designs are not appropriate to the location, there could be negative environmental impacts and hence heightened environmental risks. Therefore, the due diligence of the technical solutions – prior, during construction and post-construction oversight - will be important to ensure minimal environmental impacts and to reduce residual environmental risks.

The following table examines briefly the environmental relevance of the coastal-related activities - Shoreline management plan (SMP) and coastal protection investments - proposed under the AF PforR:

Program Activities	Environmental Relevance
Preparation of a Long-Term SMP	This will assist in more informed decision-making on all aspects pertaining to the Kerala shoreline. This will avoid haphazard approaches to addressing coastal erosion which eventually might bring undesired impacts on the environment. The SMP will be prepared based on state-of-the-art data to understand the current and future dynamics

Program Activities	Environmental Relevance
Pilot Investments in Select Hotspots and Highly Vulnerable Sites	<p>of the shoreline dynamics. The SMP will provide policy options that are consulted with the coastal communities. This has the potential to bring sustainable and major positive environmental benefits.</p> <p>These will be undertaken in the prevailing business-as-usual scenario that is threatening to damage life, livelihood and property. Once accomplished, these investments will bring major positive environmental benefits to the coastal communities. It will address the environmental problems faced by them. The proposed coastal protection works particularly seawalls can cause accretion and erosion which may eventually cause coastal erosion if not designed properly. The seawalls will be designed by NCCR based on proper understanding of the shore dynamics to avoid coastal erosion. During construction, these investments will result in localized, temporary and reversible EHS impacts. Mitigation measures for EHS will be included in the bidding documents. Their implementation by the contractors will be monitored by WRD.</p>

4.1.2 Social Risks and Impacts

Aimed at enhancing the government’s informed decision making for coastal and shoreline management, this activity has potential to bring major social benefits to the most vulnerable populations along the coastline. However, there are potential social risks such as exclusion of voice and perspectives of the vulnerable groups, especially fisher-folk, women, SC/ST, migrant workers and persons with disabilities from the planning processes. If the concerns of the affected communities and vulnerable groups are not properly addressed, this process can have major short, medium and long-term impacts many of which could be also irreversible in nature.

There is national and global evidence to suggest that women’s deep connection and dependence on the coastal ecosystem is undervalued and un-recognized and therefore their voices may be missed out even during consultations. It is therefore recommended that the SMP development process is highly inclusive, consultative and focuses on community led initiatives, also along with the technical and infrastructure-based solutions. SMP presents an opportunity to support the development process for the key socially excluded groups and women on shoreline protection and management. This will also ensure their greater buy-in, support as well as leadership on various medium and long-term solutions that have lasting positive social and environmental benefits. To achieve these objectives, a comprehensive Social Inclusion and Gender Assessment is strongly recommended to be a part of the SMP.

Pilot investments in select hotspots and highly vulnerable sites are envisaged to protect affected communities against severe situations such as flooding and sea attacks that threaten their lives and livelihoods. Field consultations and visits confirm the critical situation confronting the coastal communities, more so the vulnerable groups such as women, SC/ST, PWD. However, there are potential construction related social risks such as affecting the access of these fisher-folk to the sea which can impact their livelihoods. With inadequate and in many cases further diminishing returns from small-scale fishing, these temporary impacts may actually cause more irreversible changes in their

livelihoods and put these families at risk of poverty and indebtedness. The construction works envisaged can likely lead to temporary relocation of households which are near to coast and river basin areas. Moreover, temporary relocation of the communities to shelter homes due to the flooding as well as during the construction of coastal protection infrastructure has many potential social risks, such as lack of provision of basic amenities especially to women in shelter homes, exclusion of vulnerable groups, safety of women, lack of separate toilets to women etc. Since there are construction activities involved, there is possibility of labour influx, especially that of migrant labour. This can lead to issues related to the use of local resources by migrant labour or interference with the local community leading to conflict with the community. Other potential social risks could be safety at construction sites, provision of basic facilities to labour and their families during construction. Labour Management Plan will be prepared for each sub-project involving migrant labours and will be monitored during the implementation stage. One of the most common concerns emerging from labour influx is the potential exposure of women in host communities to gender-based violence. Necessary measures for GBV prevention and mitigation will be taken in the project areas. Since the project may have significant unequal benefits from the subprojects to between various groups within the affected community can lead to some risk of intra-community conflict and/or conflict between construction workers and the community.

Currently, there are variations in how the relief efforts are undertaken across the state. Community consultations have highlighted certain districts and villages where community is dissatisfied with the relief efforts of the Panchayats and the State and have pointed to key gaps such as not factoring in the basic needs of women, children, elderly in selecting the shelter sites or the movement from homes to these shelters and the moving back from relief shelters to homes. For instance, a clear gap was that on return the families found their homes in unlivable condition due to too much dust and water logging. Women's work in cleaning and ensuring the houses are clean and habitable increased manifold. Thus, it is imperative for ensuring proper site-specific documentation of all these risks and ensuring adequate staff and establishment of institutional mechanisms to evolve mitigation measures and their routine monitoring and reporting. Therefore, a temporary relocation and relief framework as part of the Shoreline Management Plan and separate site-specific temporary relocation and relief plans would be needed to be prepared by

Key Social Risks

- Risk of exclusion of the perspectives of affected community, especially vulnerable groups, women, elderly, persons with disabilities in the processes for shoreline and river management planning.
- Restrictions or barriers to access to the water sources (rivers, tributaries, and irrigation channels) for the dependent communities, especially the elderly, infirm, persons with disabilities and pilgrims.
- Restrictions on traditional access to the sea and its resources for fisher-folks, vendors, fishing communities, coastal villages owing to the construction of sea walls and its temporary impacts on livelihood activities leading to loss of wages
- Temporary relocation of affected communities to relief shelters for longer durations which compromise on their need for healthcare, sanitation, livelihoods and safety.
- Exposure of women and girls in the coastal areas to risk of Gender Based Violence due to labour influx.
- Potential risks for migrant workers with regard to safe living conditions with basic amenities like safe drinking water, sanitation etc.
- Though a low risk, perceived or actual unequal benefits from the subprojects to various groups within the affected community can lead to intra-community conflict and/or conflict between construction workers and the community.

the contractors. This will require community involvement in identification of a safe, women-friendly relief shelters and its oversight, provision of food and other basic amenities, sanitation, etc.

4.2 Disaster recovery-related activities related to critical river infrastructure

4.2.1 Environment Benefits, Risks and Impacts

The removal of the debris, rock, boulders and stones due to landslides, and repairs / rehabilitation of the river embankments will have construction-related EHS impacts. These will be undertaken largely within the width of the river, which are under WRD’s jurisdiction. These will not have major EHS impacts. Any physical infrastructure activity will involve construction-related EHS impacts both on the workers and the surrounding community. As the scale of these activities are small, these impacts are minor, reversible and temporary. These will include air pollution, noise pollution and worker/community safety. EHS impacts will have to be addressed through provisions management measures in the bid / contract documents to reduce the residual environmental risks. With the adoption of proper management measures during the construction phase, the negative environmental impacts will be reduced and the residual environmental risks will be minimal.

The following table examines the environmental relevance of the disaster recovery-related activities proposed under the AF PforR:

Program Activities	Environmental Relevance
Phase 1: Disaster recovery-related activities related to critical river infrastructure (intakes, flow pathways, hydraulic structures etc.)	These will have minor construction-related environmental impacts; these will be undertaken within the width of the river, which is under WRD’s jurisdiction and therefore will not have EHS impacts on community. However, worker health and safety impacts will have to be addressed through provisions management measures in the bid / contract documents to reduce the residual environmental risks.
Phase 2: medium-term, comprehensive surveys will be conducted	No environmental impact
Phase 2: Selected protection works (structural and non-structural) at critical hotspots, such as embankment reconstruction	These works will have minor construction-related EHS impacts that will require to be managed through proper mitigation.; these will be undertaken within the river / river bank in areas of WRD’s jurisdiction and therefore will not have EHS impacts on community.
Phase 3: Implementation of a full-scale river basin management plan	The implementation works will have minor, temporary and reversible construction-related EHS impacts that will require to be managed through proper mitigation.

4.2.2 Social Risks and Impacts

The river embankment works are targeted towards reducing the river erosion and flooding that impacts several vulnerable groups live in the river basin and are entirely dependent on the rivers for their livelihoods and therefore envisage significant social benefits. However, there are likely temporary social impacts on fisher-folk community and those practising agriculture/paddy cultivation such as restrictions on access, loss of wages for agricultural labour, who are mostly women and labor influx related concerns. As recommended above, contractors will need to adhere to provisions included in the

bid/contract documents for labor management and safety, including ensuring mechanisms to address any gender-based violence related concerns.

4.3 Open Data Initiative

Sharing of data relevant to climate change will lead to greater awareness, improved problem identification and more appropriate development solutions. This activity has the potential to lead to positive social and environmental benefits and reduced social and environmental risks.

4.3.1 Environment Benefits, Risks, Impacts

Given that Open Data Initiative aims to build resilience to climate and disaster to reduce the state's vulnerability to natural hazards and the impacts of climate change. Reducing vulnerability has the potential to manage environmental impacts better in the wake of a disaster.

4.3.2 Social Risks and Impacts

In particular, this can address specific key social risks and gap currently faced both by the affected communities, especially vulnerable groups such as women, SC/ST, small-holder fisher households and state's systems. However, there is possibility of some of these gaps remaining unaddressed if i) if there are no gender and social inclusion considerations in designing/selecting channels to relay and communicate the information ii) no effort to provide gender-specific information so that there is greater relevance and use by women and other vulnerable groups iii) if there continues to be gap in gender-related information being gathered such as building knowledge on how climate change impacts women, what is their current access to such weather forecasting and warnings, what gaps do they face in accessing relevant information and what more information and support they need.

4.4 Climate Budget

Climate budget preparation is envisaged to enable the state to track and report financial flow that support climate change mitigation and adaptation, to build trust and accountability about climate finance commitments and monitor trends and progress in climate-related investments

4.4.1 Environmental benefits, risks and impacts

A climate budget for the state is likely to lead to better management of climate mitigation and adaptation. This has the potential to lead to greater environmental awareness and implementation performance and ultimately leading to reducing the environmental risks.

4.4.2 Social benefits and impacts

This proposed initiative is likely to have significant positive impacts for vulnerable communities such as women, SC/ST, fisher folk and other coastal communities who are

facing severe and adverse climate related social impacts affecting their health, safety, land and property and livelihoods. If the budget preparation process is not informed by social and gender considerations, the sectors and interventions which are crucially needed by the vulnerable communities can get missed out. Moreover budgets for interventions that are narrowly defined towards infrastructure or technical solutions only, may again have unintended social risks and impacts. Therefore it is crucial for the budget planning process to be gender and social inclusion informed. This initiative has the potential to move beyond a 'risk mitigation' to "enhanced gender and inclusion impacts "

4.5 Other associated social risks from ongoing resettlement and rehabilitation efforts of the State and other donors

In particular, the State's LIFE Mission offers a housing scheme for people staying in outlying, coastal and plantation areas or in temporary housing. Alternatively, it also offers a fixed sum of Rs 10 lakhs to beneficiaries who do not want to stay in the housing complexes constructed under the Mission. While this is a good effort of the government, there is reluctance among the coastal communities to relocate as they will lose the easy access to the sea and this directly impacts their livelihoods. It is understood that ADB is also planning to support the State and will be looking at more critical sites and hotspots for coastal protection works and likely will involve large-scale construction activities. It will be therefore important to ensure that activities under the AF, are not leading to any involuntary resettlement and relocation of the people as this could bring in some reputational risks to the Bank. Given the long-standing relationship of World Bank with GoK, there can be efforts to ensure that that concerns of the communities are properly addressed in the overall program of the Government to relocate fishing communities.

DRAFT

5 Legal and Policy Framework for the Program

The national and state level laws and legal policies have been reviewed and are found to adequately safeguard the environment concerns and social risks and concerns of all communities likely to be impacted by the proposed investments under the AF, especially women, socially and economically vulnerable groups, scheduled castes and scheduled tribes in the implementation of schemes across sectors. Specifically, the laws and policies related to land acquisition, local self-governance, labour, gender and grievance redressal and citizen's engagement all provide an empowering and conducive environment for affected communities. With additional investments proposed for coastal protection, flood recovery and shoreline management, the applicable laws and policies such as the CRZ Notification 2011 and 2019 were also reviewed to see how these impact traditional coastal communities, their houses, lands and the livelihoods of fisher-folk communities. However, despite some of these strong legal and policy frameworks, there is inadequate emphasis on environment and social impact assessment, management and monitoring requirements to address key risks. Thus, these frameworks will be further strengthened by enhancing capacities of implementing departments on environment and social risk management, supporting the development of institutional mechanisms such as for undertaking environment and social risk screening for each site where works are envisaged and finally to develop project-specific environment and social mitigation measures.

5.1 Legal and policy framework

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
ENVIRONMENT		
Environment (Protection) Act of 1986	The Act is an umbrella legislation that provides a framework for Central and State Authorities established under prevailing laws. It provides for the protection of the environment in an overall sense.	Standards that are specifically applicable to air, water, noise and soil components to all the civil works related to the WSS infrastructure development. Except for coastal protection investments, none of the works require national or state level EIA clearance. Organization: Department of Environment, Directorate of Environment and Climate Change, various authorities and State Pollution Control Board
CRZ Notification 2011 and 2019	This notification aims to protect the coastal ecosystems, ecological resources and coastal pollution prevention. GoK is presently administering the CRZ Notification 2011 for which the Coastal Zone Management Plan (CZMP) maps are available. Once	Under the Act, the implementing agency (whether WRD or HED or associated organizations) are required to obtain an

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
	the maps are revised / updated to the new CRZ Notification 2019, GoK will commence administering to the newer regulation. This is in line with legal and regulatory practice in the country.	appropriate CRZ clearance from either the State's Kerala Coastal Zone Management Authority (KCZMA) or National MoEFCC. All the civil works pertaining to the coastal protection attracts the provisions of the CRZ Notification, 2011. The Kerala shoreline is highly erosion prone due to the nature of the Arabian Sea particularly during the monsoon months. Annex 3 provides the procedures for obtaining this CRZ clearance. Applicable to all civil works pertaining to the coastal protection investments. Organization: KCZMA, Department of Environment, Directorate of Environment and Climate Change
Wetlands (Conservation and Management) Rules, 2017.	These Rules provide for conserving and managing (a) wetlands categorized as 'wetlands of international importance' under the Ramsar Convention (Ashtamudi, Vembanad and Sasankota); and (b) wetlands as notified by the Central Government and State Government.	Under these Rules, the implementing agency (whether WRD or HED or associated organizations) are required to provide information on the proximity to any wetlands and obtain the necessary clearance either from either the State's Wetland Authority of Kerala (SWAK) or National MoEFCC.
Air (Prevention and Control of Pollution) Act 1981	This Act provides for the prevention, control and abatement of air pollution. It is to control emissions of any air pollutant into the atmosphere when it exceeds the standards set under the Act and associated rules	Under the Act, the contractor is required to obtain the Consent to Establish and Consent to Operate for the ready-mix concrete plant (s) if it is used for the concrete for construction. Coastal protection investments and works in the river basin stretches will require to obtain these consents. Organization: State Pollution Control Board
Water (Prevention and Control of Pollution) Act 1974	This is to control water pollution by controlling water pollutants and the maintaining or restoring of wholesomeness of water, through establishment and empowerment of Boards at the national and state levels. Ensuring adherence to water quality and effluent standards is the main purpose.	Under the Act, the contractor is required to obtain the Consent to Establish and Consent to Operate for all civil works. Further, there should be no dumping the construction waste / debris into nearby water bodies like streams.

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
		Coastal protection investments and works in the river basin stretches will require to obtain these consents. Organization: State Pollution Control Board
Noise Pollution (Regulation and Control) Rules 2000	According to the provisions of the rules notified under this act, a person might make a complaint to the designated 'Authority' in the event that the actual noise levels exceed the ambient noise standards by 10dB(A) or more as compared to the prescribed standards. The designated authority will take action against the violator in accordance with the provisions of these rules or other law in force.	Under the Rules, the Contractors need to adhere to these rules in the context of all civil works pertaining to the coastal protection investments and in the river basin stretches. Organization: State Pollution Control Board
Construction and Demolition Waste Management Rules 2016	The rules shall apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organization or authority who generates construction and demolition waste such as building materials, debris, rubble.	For all civil works, the contractor will have to obtain authorizations for all the different types of wastes as required, and will dispose scrap / waste only to authorized agencies. Applicable to coastal protection investments and works in the river basin stretches. Organization: State Pollution Control Board.
Solid Waste Management Rules 2016 and references in state acts / rules & guidelines including Kerala State Policy on SWM 2018, Kerala SWM Operational Guidelines, 2017, Kerala Municipalities Act 1994 and The Kerala Panchayat Raj Act 1994	These rules define solid waste as those generated by all the households, hospitality industry, big and small market vendors. These rules are applicable to the municipal areas and beyond. In particular, the rules have mandated the source segregation of waste in order to channelise the waste to wealth by recovery, reuse and recycle	These Rules are applicable for any incidental waste generated the contractor during the civil works. Applicable to all coastal protection investments and works in the river basin stretches. Organization: LSGIs and State Pollution Control Board.
Plastic Waste Management Rules 2016 and state orders	This is to ensure segregation, collection, storage, transportation, processing and disposal of plastic waste in a manner that there is no damage is caused to the environment during this process. Ban on single use plastic items in the State, wef. 1.1.2020- GO MS No 6, 2019 Env dt:27.11.2019 and other related orders	These Rules are applicable for any incidental plastic waste generated the contractor during the civil works. Applicable to coastal protection investments and works in the river basin stretches. Organization: Department of Environment and State Pollution Control Board.

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Indian Forest Act 1927, Forest Conservation Act 1980, Forest Rights Act 2006 and associated Kerala Preservation of Trees Act, 1986	<p>Under this Act, administrative approval must be obtained from the Forest Department to clear designated forestland. According to this although the land is under the control of state government, due to its protected status, approval from the Government for using the land may be required.</p> <p>The State Act includes the requirement of the prior permission in writing of the authorized officer to cut, uproot or burn, or cause to be cut, uprooted or burnt, any tree as defined by the Act.</p>	<p>The use of forestland for non-forestry purposes, replenishing the loss of forest cover by compensatory afforestation on degraded forestland and non-forest land, and permission for tree felling may be required in the context of civil works pertaining to infrastructure development. Though the likelihood of forest land is low, the appropriate forest clearance will be obtained without fail.</p> <p>Prior permission for tree felling to be secured in case it is required for the investment activities. Applicable to all coastal protection investments and works in the river basin stretches.</p> <p>Organization: State Forest Department.</p>
Wildlife (Protection) Act 1972	<p>The Act provides the details the various kinds of endangered and other important faunal groups that need to be protected. In particular, this deals with permissions for working inside or diversion of national parks and sanctuaries.</p>	<p>In the context of civil works pertaining to infrastructure development, this may be relevant if wildlife is encountered in the civil works of the river basin stretches.</p> <p>Organization: State Forest Department.</p>
The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the Rules, 1959	<p>The Act and Rules protect the archaeological sites, and no person shall undertake any construction within the protected or regulated area except in accordance with the permission granted.</p>	<p>Wherever the civil works for infrastructure development are carried out in the vicinity of cultural properties, the provisions of the Act and Rules are applicable for chance finds in all civil works pertaining to coastal protection investments and works in the river basin stretches.</p> <p>Organization: Archaeological Survey of India offices at Thiruvananthapuram, Ernakulam and Thrissur.</p>
Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and	<p>The Act and the associated Kerala Rules is a comprehensive for regulating the safety, welfare and other conditions of service of these workers.</p>	<p>Health and safety arrangements for the construction workers involved with the civil works. Applicable to all coastal protection investments and works in the river basin stretches.</p> <p>Organization: Labour Commissionerate, Department of Labour</p>

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Kerala Rules, 1998		
National Green Tribunal (NGT) Act 2010 and Orders	The National Green Tribunal has been established under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.	NGT Orders as applicable. Applicable to all coastal protection investments and works in the river basin stretches. Organization: Government of Kerala, State Pollution Control Board and other special Committees
SOCIAL		
Coastal Protection		
Coastal Resilience Zone Notification 2011	Regularizes the dwelling units of the traditional coastal communities including fisherfolk, tribals as were permissible under the provisions of the CRZ notification, 1991, but which have not obtained formal approval from concerned authorities under the aforesaid notification shall be considered by the respective Union territory CZMAs and protects the traditional coastal communities by ensuring land is not transferrable to non-traditional coastal community or used for commercial purposes. It also provides for facilities such as fishing jetty, fish drying yards, net mending yard, fishing processing by traditional methods, boat building yards, ice plant, boat repairs and the like that are the important needs of small fisher folk.	The proposed investments for coastal protection and shoreline management planning need to acknowledge the land rights of traditional coastal communities. Thus, affected persons cannot be relocated or displaced on the pretext of coastal protection.
Coastal Resilience Zone Notification 2019	Permits infrastructure that are required by coastal communities such as dispensaries, schools, public rain shelter, community toilets, bridges, roads, provision of facilities for water supply, drainage, sewerage, crematoria, cemeteries and electric sub-station which are required for the local inhabitants may be permitted on a case to case basis by Coastal Zone Management Authority (CZMA). Facilities required for local fishing communities such as fish drying yards, auction halls, net mending yards, traditional boat building yards, ice plant, ice crushing units, fish curing facilities and the like.	

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
National Policy on Marine Fisheries, 2017	<p>The overarching goal of the National Policy on Marine Fisheries, 2017 is to ensure the health and ecological integrity of the marine living resources of India's Exclusive Economic Zone (EEZ) through sustainable harvests for the benefit of present and future generations of the nation.</p> <p>The Government will also undertake review and periodic evaluation of the existing marine protected areas for providing legislative support to ensure that tenure rights of the traditional fishermen are secured, and their livelihoods not impacted by such conservation measures. To incorporate the rights of all stakeholders existing measures such as Territorial Use Rights for Fisheries will be promoted. The Ecosystem Approach to Fisheries Management (EAFM) will consider the integrated wellbeing of the marine and coastal resources and stakeholders. Further, participatory management or co-management in fisheries will be promoted.</p>	<p>Though not directly a policy affecting proposed interventions, it is felt that development of Shoreline Management allows for a greater focus on livelihoods of fisher-folk communities, especially small-holder fish farmers.</p>
Water Resources Management		
Kerala River Basin Conservation and Management Authority Bill, 2020.	<p>Accepts that there is an urgent need to conserve and regulate water resources as there is no regulatory mechanism or law to ensure judicious, equitable and sustainable management, allocation and utilization of water resources. This regulatory authority provides for determining distribution of water resources, implement water tariffs and criteria to levy water charges after consulting users, prepare and monitor integrated river basin master plans for each river system, develop, maintain a comprehensive hydro-meteorological information data base; fix the quota of water allocation/distribution following principles of equitable distribution-every landholder in the command area shall be given quota based on the extent and nature of land in the command area.</p>	<p>Provides for 'Basin Management Committees' with representation of elected representatives, LSGs, NGO/CBO in respective river basins; authority to fix quota of water allocation at project, sub-basin, basin level on principles of equitable distribution in command area; ensure that principle of "tail to head" irrigation is implemented with lands at tail-end (usually marginalized lands and landowners) given water first.</p>
Governance Related		
73rd Constitutional amendments	<p>The Panchayati Raj Act was aimed at institutionalizing a 3-tier system of local governance at District, Block and village level for economic development & social justice. The Act lists 28 functions to be delegated to panchayats along with their functionaries and related funds/ resources. Kerala is the state with the highest number (21) of functions devolved to RLBs (out of 28 functions). These functions include internal roads, public health, water resource, agriculture and allied areas, poverty alleviation are within its mandate. The Act reserves seats for</p>	<p>For planning and community support on coastal protection and shoreline management, the project will engage with ULBs. Through the Gram Sabha, Panchayats will play an effective role in providing feedback on local needs and priorities for integrating into coastal protection interventions. Moreover, the Panchayats are</p>

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
	women, scheduled castes, tribes. All crucial decisions related to village development are to be ratified by Gram Sabha –village assembly of adult voting members.	currently responsible for managing the relief efforts during flooding, sea attacks and other disasters.
74th Constitutional amendments	ULBs are entrusted with preparing plans for economic development and social justice under Article 243 G and 243 W of Constitution. In Kerala, municipalities are devolved 18 out of 19 functions related to municipalities listed in 12 th Schedule urban planning including town planning; regulation of land-use & construction; planning for economic & social development ; roads & bridges; water supply for different purposes; public health, sanitation; fire services; urban forestry, environment; safeguarding interest of weaker sections; slum improvement and upgradation; urban poverty alleviation ; amenities like parks, gardens, playgrounds; promotion of culture, education & aesthetics; burials /burial grounds; cremations/ cremation grounds; cattle pounds; prevention of cruelty to animals; registration of births /deaths; public amenities- street lighting, parking, bus stops, public conveniences; and regulation of slaughter houses & tanneries.	For planning and community support on coastal protection and shoreline management, the project will engage with ULBs. Through the Ward Sabha (Ward Level Assembly) the municipalities will play an effective role in providing feedback on local needs and priorities for integrating into coastal protection interventions. Moreover, the ULBs are currently responsible for managing the relief efforts during flooding, sea attacks and other disasters.
Kerala Municipality Act 1994	In line with the 74 th amendment, the Act provides for convening of Ward Sabhas, constituting Ward (Standing) Committees in municipalities ⁴ . These local institutions create opportunities for Municipality to involve citizens, inform them, disclose information on budgets, expenses and development works, citizens in turn get opportunity to participate, share their concerns, demand accountability, and provide feedback	Same as above.
Land related		

⁴ Ward Committees may consist of two or more wards (population of 3 lakhs) and the Chairman of the Committee will be one of the councillors of the Wards covered under the Ward Committee. In any case, every Municipality has Ward Sabhas headed by the elected Ward Councillor for every ward if the population of the Municipality exceeds one lakh. The Act provides that a Ward Sabha/ Committee shall consist of representatives from resident associations, neighbourhood group, from various political parties, professionals, members of various cultural organizations and educational institutions.

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Right to Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARRA), 2013	<p>Objective of 2013 Act is to ensure fair compensation, through resettlement and rehabilitation of those affected, puts adequate safeguards for their well-being, transparency in the process of land acquisition, including benefits for indirectly impacted -landless, enterprise owners/ vendors. Provides crucial role to Gram Sabha in approving SIA and acquiring land for public purposes.</p> <p>Social Impact Assessment (SIA) needs to determine area of impact, details of land to be acquired, alternate project sites, present land use classification, nature of holdings/ownership, number of families/ people to be affected. Calls for SIA in affected areas through a consultative process with LSGs. Plan has to be discussed with affected community & consent sought in Gram Sabha. Where LA involves involuntary displacement of SC/ST families, a development plan has to be prepared in consultation with LSG</p>	<p>Makes prior consent of landowners' requirement for LA, secures the interests of vulnerable groups including indigenous communities.</p> <p>However, the project will exclude works in any sites requiring land acquisition.</p>
Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015	<p>Emphasizes social impact assessment (SIA) and resettlement planning even prior to issuance of preliminary notification and makes arrangement for R&R benefits along with compensation package.</p> <p>Provides for LSGs to nominate a representative to work closely with and monitor SIA agency; requires prior consent from PAFs, public notice to disclose SIA, encourage those excluded or with wrong details to submit rightful claims for time bound modification, SIA Management Plan to be developed within 6 months.</p> <p>Offers compensation up to 4 times the market value in rural and 2 times in urban areas, no displacement until full payment of compensation and RR benefits, valuation of structures without depreciation.</p> <p>Directs state to impose limits on area under agricultural cultivation that can be acquired.</p> <p>Provides for transparency, minimal adverse impact so that socio-economic status of PAPs doesn't fall below what it was before acquisition. In case of acquisition for urbanization 20% developed land is reserved for owners at a price equal to rate of compensation.</p>	<p>Has adequate focus on landless, women, encroachers & squatters from vulnerable groups in offering resettlement & rehabilitation; undertaking SIA focused on transparency & disclosure.</p> <p>Considers single women, dependent siblings, widows, divorcees as separate family for the purpose of compensation.</p> <p>Homeless are entitled to constructed house, land for land in irrigation projects in lieu of compensation.</p> <p>However, the project will exclude works in any sites requiring land acquisition.</p>
State Resettlement and Rehabilitation Policy, 2017.	<p>The Government of Kerala recognizes the need to provide additional assistance to what is provided in the 2nd schedule of RFCTLAR&R Act 2013. It states that the R&R policy is applicable all land acquisition in the State and by Direct/Negotiated purchase</p>	<p>Creates provision of negotiated settlement to ensure PAPs can negotiate better rates than what's available under LARR 2013 and also space to negotiate additional assistance/ amenities</p>

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
	It expedites /simplifies procedures of LA for public purpose by providing for direct purchase or negotiation to ensure just and reasonable compensation for land acquired, relieving owners from burden of litigation for enhanced compensation, offers space for negotiating additional package, including employment/ stake holding, infrastructural amenities as provided in 3rd schedule	However, the project will exclude works in any sites requiring land acquisition.
Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights (ROFR) Act, 2006, (including Amendment 2012)	<p>Recognizes and records customary rights of forest dwellers who have been residing and depending on forest for generations for their bona fide livelihood needs.</p> <p>Provides for diversion of forest for meeting development/ infrastructure needs of community by felling trees and permitting land use change/ diversion, providing usufruct rights to forest produce</p>	<p>Secures indigenous communities residing inside forest from land alienation, recognizes customary rights over land, forest resources & their development needs.</p> <p>The project will not affect the existing land tenure arrangements or customary rights over land</p>
Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989	<p>Protects Scheduled Castes/ Tribes from wrongful occupation/cultivation of land owned by them or notified to be allotted to, a member of a Scheduled Caste or Tribe member or transfer of land allotted to them;</p> <p>Prevents against wrongful dispossession of a member of Scheduled Caste or Tribe from his land or premises or interference with enjoyment of rights over land or water, any forceful removal/ causing alienation and for them to leave house, village or place of residence.</p>	<p>Secures property rights of vulnerable communities (SC/ST) and provides legal protection against state or private action to alienate them from land owned/ accessed by them.</p>
Kerala Land Reforms (KLR) Act, 1962, Restriction on Transfer of Alienated Lands (RTLAL) Act, 1975, and Prevention of Atrocities Act, 1989	<p>Under the KLR Act, 1962, Scheduled Caste (SC) and Scheduled Tribe (ST) families are eligible for 50% of lands identified as surplus by the State.</p> <p>RTLAL Act, 1982 restricts land transfer by Scheduled Tribe members to non-tribal persons, and restore lands alienated to non-tribals. The Act provides for restricting transfer of lands by members of Scheduled Tribes and for restoration of possessions of lands alienated by such members and for matters connected therewith.</p>	<p>Provided for distribution of surplus land to landless from vulnerable communities and correcting any historical injustice in the form of alienation of their land.</p>
Kerala Land Reforms (Amendment) Act, 1969 and Kerala Land Reforms (Tenancy) Act 1970	<p>Puts an end to the feudal system and ensures rights of tenants on their land. Cash crops/ plantations were exempted from its purview, although taken up by subsequent legislations.</p> <p>Restoration of land to dispossessed persons or tenant from whom resumed, allows for determination of fair rent in respect of land, if no such fair rent has been already determined through a Land Tribunal/ Land Board</p>	<p>Recognizes the right of the tiller of the land/ tenant, secures their tenancy and prevent sudden eviction of tenants that have been tilling lands for certain number of years.</p>

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Kerala Compensation For Tenants Improvements Act, 1958	Tenant is entitled to compensation for every spend on land and asset improvements and to compensation for improvements which were made by him, his predecessor-in-interest or by any person not in occupation at the time of the eviction who derived title from either of them at the time of returning the land to its owners. Every tenant to whom such compensation is due shall be entitled to remain in possession until payment of compensation. Such improvements will include building structures, works, trees, standing crops/ plantations also need to be compensated by the evictee or the landowner.	Acknowledges the rights of socially vulnerable, economically weak tenants and investments made by them over the period of their tenancy towards improvement of those lands and the need for them to be compensated at the time of ownership transfer.
Malabar Tenancy Amendment Act, 1954 (Applicable over Kerala)	The Act prohibits eviction of tenants, who have had possession of the land for more than 6 years. Every tenant of a plantation shall have fixity of tenure in respect of his holding and shall not be evicted. If in any one of the six agricultural years following such eviction, the landlord, who has obtained such eviction fails, without reasonable excuse to use a major portion of the lands, for the purpose for which eviction was obtained, or transfers it to any person on any kind of lease or mortgage with possession, the tenant shall be entitled to sue for restoration of the possession of all the lands from which s/he was evicted and to hold them with all the rights and subject to all the liabilities of a tenant.	This, along with other legal instruments on tenancy, provide security to tenants/ tillers against forced eviction from the tenement (especially in case of long duration plantations) and recognizes the association of tiller with their land.
Gender		
The sexual harassment of women at workplace (Prevention, Prohibition, and Redressal) Act 2013	Protects women workers from sexual harassment and abuse of power at their workplace and provides for constituting Internal Complaints Committee to look into complaints of sexual harassment in every public and private office with 10 or more workers, including women workers. Provides guidance on redressal against such complaints, including its internal investigation in a time bound manner and encourages women's economic participation in the formal economy.	Recognizes the need for legal protection of women workers against abuse, exploitation in all government institutions as well as private firms/ agencies contracted by the program.
Kerala Policy on Women upgraded to Gender Equality and Women's Empowerment (GEWE)⁵ Policy 2014	To strengthen gender equality and women's empowerment in the State, it recognizes the gender biases in society which have skewed the distribution of development benefits, gender indicators and recognizes the need to work with men on behaviour change to improve gender outcomes. The policy establishes an accountability framework to monitor gender-informed development projects in the State. It advocates for preparation of Gender Action Plans (GAP) by each department to ensure that gender outputs and indicators are identified,	Creates systems for engendering development impacts and mainstreaming gender in the functioning of public systems across departments.

⁵ <https://kerala.gov.in/documents/10180/46696/Gender%20Equality%20and%20Womens%20Employment%20Policy>

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
	integrated in organizational outcomes, results tracked, monitored and periodically reported by each state agency.	
Kerala State Policy for People with Disabilities-PwDs, 2015	One of the few states of the country that recognizes the necessity and inevitability of including disability dimensions in its development agenda, programs, and development plans of the State. Provides for separate budgetary allocation for managing disability.	Relevant to operation to safeguard the vulnerable against exploitation and discrimination and ensure their inclusion in schemes and programs.
National Legal Services Authority Act, 1987	Free Legal Aid to vulnerable sections of the society for creating legal awareness by spreading legal literacy and organizing legal aid clinics in Panchayats to provide free legal services, training community level para-legal workers to help vulnerable groups in accessing legal aid, knowing their rights and entitlements, and negotiating. Better with the power structures.	Provides a system of legal redress on basic rights over and above the grievance systems in place at the state, department and LSG levels.
Kerala Vayojana Nayam or the Old aged Policy, 2013	<p>This state policy provides for a State Old Age Council under Chairmanship of Minister of Social Justice and District Old Age Councils under District Collectors. It calls for making scheme/project specific Action Plans for welfare of senior citizens, ensures protection & welfare of citizens above age of 60, especially elderly women by providing better social, economic conditions and healthy life to Senior Citizens.</p> <p>The policy directs all departments to ensure better social conditions, legal aid, protection from abuse, help desk for elderly under Kerala Social Security Mission. It also promises better healthcare, free medicines / consultations, mobile clinics, geriatric wards and palliative care in hospitals as high priority.</p>	Provides social protection and safety against discrimination to this vulnerable constituency in the state.
Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	<p>Protects rights of urban street vendors & regulates street vending. It provides for survey & certification of street vendors to legalize their right and protect them from sudden eviction or relocation; provides for rights and obligations of street vendors, designation of vending spots as per street vending plans; organize their capacity building to raise awareness.</p> <p>It sets up a Town Vending Committee-TVC to declare no-vending zones for public purposes, relocate vendors from such areas after giving notice, entitle them to new area for carrying out vending as determined by local authority and TVC.</p>	Gives legal protection and safety against economic displacement and un-notified relocation to street vendors
Labour Laws		

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Building and Other Construction Workers' Welfare Cess Act, 1996	The act seeks to regularize employment, working conditions of construction workers and provide for their safety, health and welfare, through constitution of Welfare Boards in every State to provide and monitor social security schemes and welfare measures targeting them. It is applicable to all establishments with 10 or more workers, have to register themselves and pay a cess on cost of construction for use by the state for labour welfare. It also warrants employers to provide safety measures at construction sites like canteens, first-aid, and accommodation for non-local workers.	Measures in place for welfare of laborers, relevant for sectors that involve investments and engagement of construction workers.
Child Labor (Prohibition and Regulation) Act, 1986	To protect the interest of children below 14 years so they are not employed in certain occupations, regulate their working conditions in certain employments.	Measures to prevent child and bonded or forced labour and provide legal safeguard against their deployment, relevant for investment sectors engaging laborers/ workers.
Contract labor (Regulation & Abolition) Act, 1970, Bonded Labor System (Abolition) Act, 1976	To regulate the employment of contract labor in certain establishments and to provide for its abolition in certain circumstances	It prevents gender-based discrimination in employment and provides for labour insurance/social assistance against any eventuality/ accident.
Equal Remuneration Act, 1976, Workmen's Compensation Act, 1923 and 2009, Personal Injuries (Compensation Insurance) Act, 1963, The Minimum Wages Act, 1948, Workmen's Compensation Act, 1923, Maternity Benefit Act, 1961	Provide equal remuneration to men & women workers, prevent discrimination against women in matters of employment, employers to compensate workman's spouse / dependent sons, daughter in case of injury at workplace and mandatory worker insurance by employers against such liability	Prevents discrimination and ensures improved working conditions for different category of agri workers.
Kerala Plantations Labour Act, 1951	An Act to provide for health & welfare of plantation workers, to regulate their working conditions; provide access to education, housing, regulation of working hours, prohibition of child labour and employment of women in night shifts.	Ensure social assistance and safety net to the workers in the state.
Kerala Labor Welfare Fund Act, 1975/ Kerala Payment of Subsistence Allowance Act, 1972	Provide for constitution of a labour welfare fund to finance welfare activities for laborers in the state including implementing specific schemes targeting them including provision of subsistence allowance to the employees in certain establishments during the period of their suspension or suspension of operations	

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
Inter-State Migrant Workmen (Regulation Of Employment And Conditions Of Service) Act, 1979	To regulate the work conditions of migrant workers from other states and is applicable to establishments employing 5 or more migrant workers; provides for certain facilities like housing, medical aid, travelling expenses from home up to the establishment and back.	To prevent unfair wages and exploitation at the hands of middlemen, especially in sectors employing outsiders. Also relevant since state has highest proportion of migrant laborers
Grievance Redress/ Citizens Engagement		
Right to Information Act, 2005	Empowers citizens to demand information on functioning of public systems if it impacts their lives or is of public interest. Offers rights-based framework under which citizens get a legal tool with which to demand accountability and explanation from all/any public authorities; designates a Public Information Officer in all public offices to provide info; creates State /Central Information Commissions (statutory) to look into appeals regarding unsatisfactory information provided to citizens or unclear interest in demanding information.	Ensures transparency and accountability in the govt operations and citizen's access to public information.
Kerala State Right to Service Act, 2012	To provide effective, time-bound delivery of services to the public, redress of grievances to citizens by making government servants liable in case of default. State has notified more than 90 public services covering departments of SC, ST development/ finance, agriculture, PWD, Road transport, LSGD, Co-ops, health and family welfare, social justice etc- services like scholarships, incentive grant, loans, distress funds, caste certificates, approval of building plans, valuation of structures, water sewerage connection, water quality testing; registration of societies. Also provides for a 2 -tiered appellate system to file appeals in case grievances are unattended.	Government systems are made accountable, aimed at providing agreed quality of service as defined by the act. Aimed at increased accountability and transparency in govt functioning across most departments, offering good governance.
Kerala Municipality (Preparation of Citizen Charter) Rules 2000	All municipalities and panchayats are to publish their Citizens Charter every year describing services to be rendered to its residents, conditions of such service and their stipulated timeframe. Some of these include birth/ death/ marriage/ property registration, enrolment in social security schemes, public works.	Promotes transparency in the delivery of core functions of urban and rural local governments
Disaster Risk Management		
Kerala State Disaster Management Policy 2010	Institutes structures and systems to minimise disaster related human, property and livelihood losses for poor, vulnerable by strengthening capacities and resilience of vulnerable community, especially women; capacitates administrative and community level systems for pre and post disaster interventions through awareness generation and capacity building; Designates Kerala Disaster Management Authority- KSDMA to function as apex decision-making body to facilitate, co-ordinate, monitor all disaster related activities, & District	This community based disaster management-policy leverages existing social capital for management of disaster response and makes PRIs the frontline agency for disaster management planning and execution.

Name of law/policy	Relevant provisions/ features of the Act/ Policy	Relevance for Environment/Social Management in Current Operation
	<p>Disaster Management Authority as district planning, coordinating, implementing bodies for disaster management.</p> <p>Emphasis on imparting training to various departments, implementation agencies, NGOs & community on DRM; local authorities to coordinate community based disaster preparedness activities tailored to local needs.</p>	
Disaster Management Act, 2005	<p>Notified State and District Disaster Management Authorities laying down functions and responsibilities for state and district authorities. State Executive Committee of State Disaster Management Authority constituted. These authorities are to evaluate preparedness at government & non-government levels to respond to any disaster; promote community education, awareness and training on disasters which the State is vulnerable to and measures needed to prevent, mitigate and respond to it.</p>	<p>Creates a role for communities to be involved in prevention and preparedness and recognizes the need for their capacity building.</p>

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5.2 Regulatory Systems Assessment

5.2.1 National-level environmental regulatory systems

The Ministry of Environment and Climate Change (MoEFCC) is responsible for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programs. The broad objectives of the MoEFCC are: (i) Conservation and survey of flora, fauna, forests and wildlife; (ii) Prevention and control of pollution; (iii) Afforestation and regeneration of degraded areas; (iv) Protection of the environment and (v) Ensuring the welfare of animals. These objectives are well supported by a set of legislative and regulatory measures, aimed at the preservation, conservation and protection of the environment. Further, the Central Pollution Control Board (CPCB) is a statutory organization that provides technical services to the MoEFCC on all matters pertaining to the legal and regulatory systems. These broader national-level regulatory systems are a prerequisite and drive state-level legal and regulatory framework that the AF PforR will have to adhere with. It is imperative to have a well-developed, established national system in order to effectively manage environmental effects and risks at the state and the program level. Section 5 has further information on the applicable national legislations and regulations that the above institutions are responsible for.

In the Indian context, MoEFCC is responsible for these national-level systems are well-developed and in place across all sectors. The regulatory procedures and practices are clear, streamlined and widely available. In the context of the AF PforR, the national-level regulatory systems pertaining to the CRZ and EIA Clearance are directly applicable. If the type of coastal protection investments are such that the state regulatory agencies are required to forward to national regulatory agencies, then MoEFCC will have to provide the CRZ clearance and the Environmental Clearance as required. However, the national-level regulatory systems, particularly EIAs, does not emphasize on stakeholder / community consultations and disclosure as the Bank's requirements do. Hence, the EIA systems will need to be addressed through ToRs for conducting EIAs that additionally include stakeholder / community consultations, and so that their feedback suitably in the plans and designs. These will have to be developed and finalized by RKI after program effectiveness.

5.2.2 State-level environmental regulatory systems

The regulatory agencies relevant to the Program activities are the Kerala Coastal Zone Management Authority (KCZMA) , State Environmental Impact Assessment Authority (SEIAA), State Wetlands Authority of Kerala (SWAK), Kerala State Pollution Control Board (KSPCB) and the State Forest Department. Each of their roles and responsibilities are briefly described here:

- The KCZMA is the regulatory agency that is responsible for all state-level coastal zone management activities. All the coastal protection investments as well as the Shoreline Management Plan (SMP) under the AF PforR will have to be consistent with the regulatory requirements administered by the KCZMA.
- The SEIAA is established at the state level and is authorized to deal with environmental clearance for projects falling under category "B" of schedule in EIA Notification 2006. To support SEIAA Kerala, the State Expert Appraisal Committee

(SEA) Kerala has also been constituted to provide technical advisory inputs to the SEIAA.

- The SWAK is a statutory authority that functions as State's nodal agency to implement the task of policy development, regulatory frameworks, integrated management, planning, implementation of action plans, capacity building, research, networking, communication, awareness, creation and raising of funds for wetland management.
- The KSPCB is responsible for the issuance of consents to establish and to operate to contractor for all civil works under the Air Act and Water Act;
- The State Forest Department is responsible for issuing the tree cutting clearance if such incidental tree cutting is required for the civil works being planned.

Related to the judiciary, under the National Green Tribunal (NGT) Act 2010, the Tribunal issues orders for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. Given its statutory importance, these require the attention of the highest level of the State Government. There are also NGT orders pertaining to coastal zone management, i.e. establishing a SMP, which is presently under way to meet the NGT requirements.

All the aforementioned state-level regulatory agencies are in place and their procedures for compliance are also being administered. Procedural compliance is effective wherever the proponents approach them for obtaining regulatory clearance. Further, these agencies respond when complaints and issues are brought to its notice either by the public or through the legal requirements such as the NGT. For these purposes, the state-level systems pertaining to regulations are streamlined and the organizational capacities are sufficient. However, these agencies do not have the manpower capacity to proactively engage in procedural compliance and to oversee projects under implementation to check for their adherence to the conditions of the clearances given.

Therefore, there is a need for the RKI Secretariat to have an environmental screening oversight to ensure that the clearances are obtained. The ESSA Environment team has drafted a possible screening form and criteria that will have to be finalized during implementation (Annex 2). Further, RKI Secretariat will also have a monitoring oversight to ensure that the clearance conditions are adhered to. Apart from these, the other PforR activities involving civil works will have only limited environmental impacts and do not entail any upfront clearances. There are only certain procedural requirements such as obtaining consents prior to the commencement of civil works. These are contractor responsibilities that will have to be supervised by the respective departments and agencies that are engaged in civil works. If there are specific situations during implementation, e.g. the NGT orders, then additional procedural requirements may be applicable. The environmental standards included in the various legislations will have to be adhered. There is sufficient capacity within the different implementing departments / agencies, their consultants and their contractors to meet these legal requirements.

As mentioned under the national-level regulatory systems, the EIA requirements do not emphasize on stakeholder/community consultations and disclosure as the Bank's requirements do. Hence, this gap will need to be addressed through conducting EIAs as per the ToRs that will be developed by RKI Secretariat after effectiveness. Additionally, to ensure that there is proper adherence to the clearance conditions, it is required to have

RKI Secretariat to conduct or to arrange to conduct periodic supervision to ensure that the implementation performance is in line with the regulatory clearance given

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6 Institutional Systems Assessment - Institutional Structures, Programs and Performance

One of the core requirements of the ESSA is to undertake institutional assessment of the systems of implementing departments to be able to manage environmental and social risks and mitigation measures.

For environmental assessment, the following dimensions were covered vis-à-vis the department or associated agencies' capacity:

- To identify possible environmental impacts, determine mitigation measures and address them during implementation.
- To adhere to the environmental laws and regulations relevant to the proposed activities.
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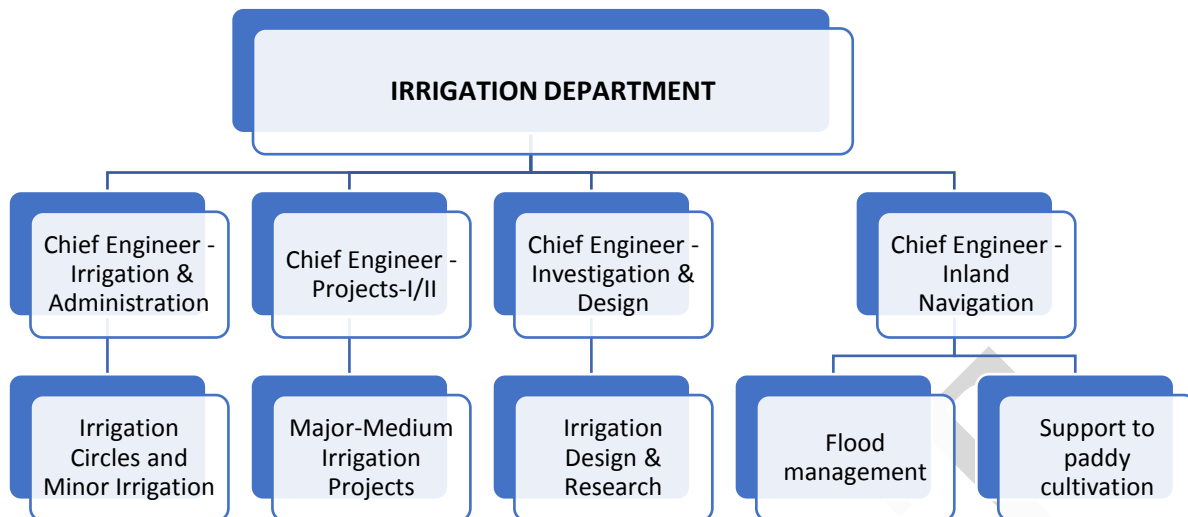
For social assessment, the idea was to assess against the following dimensions:

- Any existing staff and mechanisms for assessing and managing social risks
- Existing understanding and capacities for addressing social risks through effective mitigation measures
- Mechanisms and policies for citizen engagement
- Mechanisms and policies for grievance redressal.

6.1 Water Resources Department

The WRD is one of the primary implementation agencies and has been given the mandate for coastal protection and disaster-recovery related works along the Pamba basin. Closely associated with WRD, Kerala Irrigation Infrastructure Development (KIIDC) is a wholly owned company of the Government of Kerala was established to undertake and execute construction of irrigation and water supply projects of small, medium and large scale. Their activities have now extended to include coastal protection investments as well. KIIDC gets the required expertise from the staff of WRD to undertake the same.

Institutional Structure



6.1.1 Environment Assessment

Both for the coastal protection investments and for the repair and rehabilitation works for disaster-recovery to be lead by the WRD, the assessment finds that there is no environmental cell or division. Whichever Engineers are assigned the coastal protection project, is given the responsibility of ensuring compliance to environmental regulations. This is best intrinsically embedded within the engineering function as opposed to establishing a separate environmental cell or division. This is generally achieved with the support of external consultants and is primarily used to obtain the required CRZ or Environmental Clearances. Beyond that, these departments / agencies are not carrying out any environmental due diligence during construction, and during operation & maintenance.

For the disaster related recovery works, the AF PforR activities are limited to selected stretches and are in the nature of repair and rehabilitation works. The temporary, construction-related EHS impacts will be limited, and therefore can be managed using EHS guidelines that are integrated with the bid / contract documents. The oversight on the contractor's EHS performance can be done by the WRD's engineers who are assigned the responsibility. Training and capacity building of these engineers on EHS management will need to be provided. These will have to conducted and facilitated through the RKI Secretariat.

There is however, a need to develop some basic capacity on environmental management. Selected Assistant Executive Engineers and Assistant Engineers in each of these departments and agencies should be assigned the responsibility of the environmental function, and then the training should be delivered. Suitable training content needs to be developed and delivered as a part of the organizational system strengthening for AF PforR implementation. This will be initially an orientation session. Subsequently, there will be periodic refresher training that will enable keeping up-to-date. These will have to conducted and facilitated through the RKI Secretariat.

6.1.2 Social Assessment

As the institutional structure of the department above shows, there is no separate social cell or division, nor any designated staff responsibilities to oversee and manage social and gender risks. The ESSA finds this to be a major gap since the proposed investments under the AF are likely to have substantial social impacts.

To fill the capacity gaps on social risk assessment, the WRD engages agencies for conducting Social Impact Assessment or a cadre of social consultants to do surveys to identify community feedback on proposed investments. ESSA finds this to be a short-term solution, which does not help to enhance capacity of the department in social risk management. Since, WRD is a key implementation department, some solutions to strengthen the capacities of their staff will be crucial. Moreover, given the temporary engagement of consultants, it was also felt that there is possibility of low weightage given to these reports, mainly due to the limited understanding of social issues and concerns. To push for timely and effective mitigation measures continuity of staff/consultants is critical to ensure social risk screening reports feed into mitigation measures. However, most of these impacts can be managed with timely and well-informed mitigation measures that factor in site specific contexts (some sites may have greater risks due to a large number of households along the coast, large number of vulnerable/women headed households).

Social assessment recommends a strong social and gender orientation for the department staff and additionally, recommends the hiring of a special cadre of Social Officers for all nine coastal districts. The assessment revealed that there is a need to strengthen the capacity of engineers who have the responsibility of managing such activities, while also proposing additional deputation of staff/consultants. The site visits revealed the fragile conditions of vulnerable groups and households, especially those near coasts and rivers. To garner community support and to ensure that their concerns are duly addressed, this cadre is likely to play a critical role. The RKI Secretariat can provide initial capacity building and orientation support and ensure regular collection of data for social monitoring.

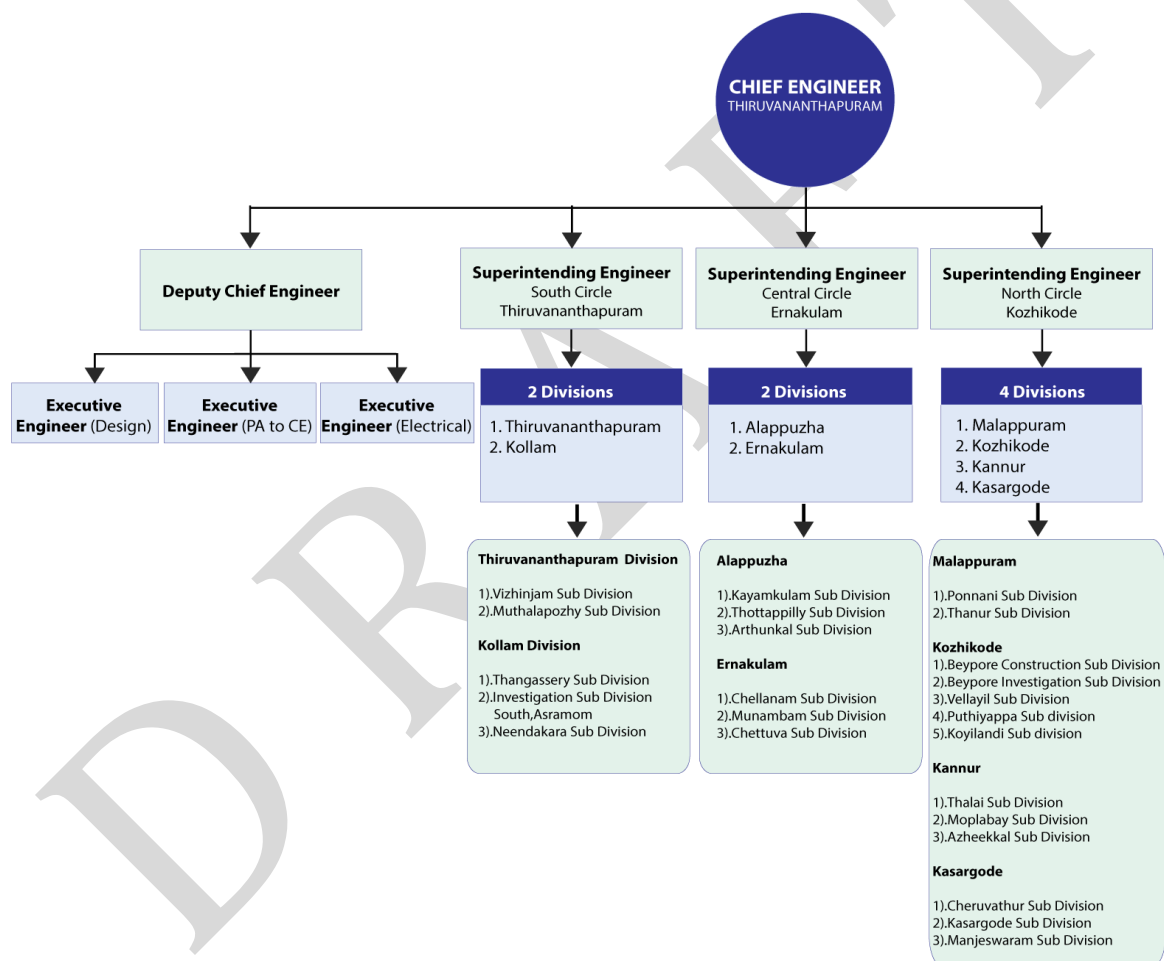
6.2 Harbour Engineering Department

Under the AF, it is proposed to engage Harbour Engineering Department (HED) in some of the proposed activities. It is a line Department of Government of Kerala, which is involved in investigation, planning, execution and monitoring of various projects in coastal areas. This department mainly does the construction and maintenance of fishing harbours and fish landing centres, fishery infrastructures like hatcheries, ponds, farms, etc., shore-based tourism projects, infrastructures of Ports and coastal roads.

HED is the service department of Fisheries Department for the execution of their infrastructure projects. In general, HED does all types of construction works such as breakwater, groins, wharfs, jetties, dredging, bridges, roads, buildings, water tanks, beach nourishment /stabilization works, fishponds/hatcheries/farms. In terms of its ongoing programs, HED's programs come under three sectors: Fisheries, Ports and Tourism. In addition, HED carries out Investigation, Planning, Design, Execution and Management of Fishery Harbours/Ports, Fish Landing Centres, Bridges, Construction of coastal Roads,

Hatcheries, Water Supply Schemes etc. It includes construction and maintenance of ice plant, Cold storage and other refrigeration related works. In addition, to the above mentioned projects HED has its own electrical and mechanical wing which monitors the related activities for successful completion of projects.

Kerala State Coastal Area Development Corporation Limited (KSCADC) is a State Government owned company that integrates the development activities in the coastal areas of Kerala. KSCADC aims to accelerate socio-economic development of the fisher folk facilitating coastal and fisheries infrastructure coupled with technological support, its sustainable management through futuristic policies and appropriate interventions. More recently, its activities include the coastal protection investments. Apart from having its own staff, KSCADC gets the required staff and expertise from its parent department, HED, to undertake these activities.



6.2.1 Environment Assessment

Similar to the key observations on the capacity of the WRD, it is felt that there is a need to develop some basic capacity on environmental management. Selected Assistant Executive Engineers and Assistant Engineers should be assigned the responsibility of the environmental function, and then the training should be delivered. Suitable training content needs to be developed and delivered as a part of the organizational system

strengthening for AF PforR implementation. This will be initially an orientation session. Subsequently, there will be periodic refresher training that will enable keeping up-to-date. These will have to be conducted and facilitated through the RKI Secretariat.

6.2.2 Social Assessment

For outreach to the community, it works closely with the staff of the Fisheries and Ports Department. The consultation with the HED teams showed that there is more focus on 'infrastructure' versus a more direct impact on livelihood support which is also responsible for lack of proper understanding of the community needs and demands. Site visits to some of the auction grounds reveal the need to re-vamp these in order to be fisher-folk and women friendly. For instance, a significant concern, both environmental and social in nature, is that of lack of sanitation and waste disposal. Increasingly, harbors are dumping grounds for plastic and solid waste, as nearby communities do not have any other options. While this is a challenge for the whole State, this can be one of the priority areas for HED to factor in its infrastructure development plans. A cadre with necessary social skills will be able to ensure such community needs are recognized and incorporated in the future and programs of the HED.

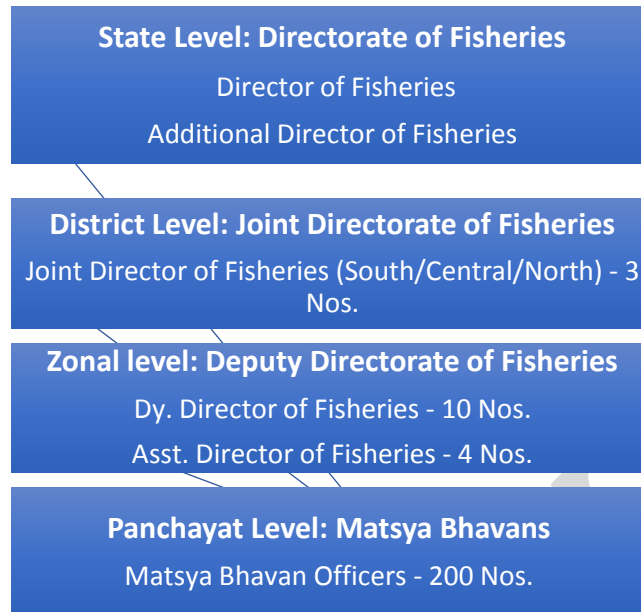
The social assessment recommends that for more sustained focus on community's social and gender needs, it is proposed that the department nominates its staff or engages few social consultants who can strengthen community interface.

6.3 Fisheries

While not a direct implementing agency, the Fisheries department has strong community interface and therefore knowledge about key social risks and challenges faced by the affected communities due to coastal and river erosion. Kerala fisheries sector contributes around 1.58% to the total GDP and the export of marine products has set ever time record of Rs 5919.02 Crores during the year 2017-18. Currently, there are 222 fishing villages in the marine and 113 fishery villages in the inland sector, where fishing and related aspects provide livelihood to a vast majority of the population. The extent of inland water resources of Kerala is highly potential for expanding aquaculture. This is therefore a significant department and was included for social assessment and seen as a potential partner for contribution to the Shoreline Management Planning process.

The department implements a range of schemes primarily focused to support the livelihoods of fish farmers, but also their well-being which includes education of the children, providing access to key insurance and safety net entitlements, creating infrastructure such as roads to facilitate.

Organizational Structure



6.3.1 Environmental Assessment

The activities under the AF undertaken by the Fisheries department do not have environmental effects. The investment activities of these departments will be routed through the Harbour Engineering Department or its special purpose vehicles, which are covered in the previous sub-section.

6.3.2 Social Assessment

There is a strong understanding within the department on the various ways in which the impact of climate change is being felt on livelihoods of fisher communities. The structure going to the down to the Panchayat level through Matsya Bhavan Officers, there is routine interface with fisher-folk communities and allows for greater community participation in all its programs and interventions. The agencies under the department are effective platforms for the fisher-folk community and allow great potential to ensure increased membership of women into more advanced economic organisations.

The '*Theeramythri*' women's groups under the Society For Assistance to Fisherwomen (SAF) that was founded as part of the department's outreach to fisher women, provide potential CBOs to integrate community-based solutions to coastal protection and management. In some of the field visits, interaction with women members of Theeramythri provide a clear conviction on the importance of organising women for their improved agency, participation in community level activities and a greater influence over the panchayat's decision making. In sites where such mobilisation was weak or had not taken place, it was evident women were reluctant to talk freely when asked about specific social and gender barriers faced by them and seeking their suggestions for how projects can better respond to their needs.

6.4 RKI Secretariat

In the aftermath of the unprecedented August 2018 landslides and floods in the history of Kerala, the Rebuild Kerala Initiative (RKI) and the Rebuild Kerala Development Programme (RKDP) were adopted as a unique approach to bring about a perceptible change in the lives and livelihoods of its citizens by adopting higher standards of infrastructure for recovery and reconstruction, and to build ecological and technical safeguards so that the restructured assets could better withstand floods in the future.” The RKI Secretariat has been established to implement the RKI’s mandate to develop, coordinate, facilitate and monitor the RKDP through a participatory and inclusive process within the various GoK’s departments and agencies, and with the communities at large.

6.4.1 Environment Assessment

The AF PforR will include the development of the SMP and coastal protection investments. The RKI Secretariat will need additional capacity on environmental management in order to be able to support and coordinate with the various departments / agencies, who will be implementing these activities. It has been planned that additional environmental staff in the RKI Secretariat to support the proposed Coastal Mission Directorate. This staff strengthening will lead to strengthening of environmental systems within the RKI Secretariat, which will be necessary.

6.4.2 Social Assessment

To coordinate social management, the RKI Secretariat created a position of a social officer (through their Project Management Support Services), for coordinating the social assessment and risk management activities pertaining to the Parent PforR. However, there has been a delay in the hiring process, and this has affected the initiation of activities that were proposed under the PAPs of the original ESSA. Based on this, the ESSA finds the current capacity of RKI to be limited in ensuring existing project work, but more so taking on the additional responsibilities that may emerge from the AF. There is currently no clear mechanism or effort to keep track of any project-related grievances, and this does not form part of the existing monitoring reporting formats evolved by RKI. Discussions have shown that there is a need for immediate orientation on issues of gender and social risks and management for RKI team to be able to play the role of coordinating activities on these priorities with the implementing departments. With proposed project investments under AF, this role needs to be bolstered as some key potential social risks have been identified that will need ongoing guidance for departments.

7 Stakeholder Consultations

A crucial part of ESSA is the ensuring a range of consultations are held directly with affected communities as well as stakeholders who are likely to be engaged or can provide guidance and subject matter expertise

7.1 Consultations on environmental aspects

7.1.1 Feedback from State Counterparts

These consultations were carried out by the Bank's ESSA team. This focused solely on the coastal protection investments as those pertaining to disaster recovery of river stretches were already covered in the Parent PforR. The highlights relevant to environmental systems are compiled in the following table:

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No.	Type	Feedback - Highlights
1	Implementing agencies / departments	<ul style="list-style-type: none"> • All technical designs are developed with the guidance given by IIT Madras or NCCR. Once developed, these agencies verify that the specific designs are in line with their guidance. • There is a shortage of armour stones and this has necessitated the use of tetrapods. • KIIDC takes up coastal protection works and assigns WRD engineers. And, WRD also undertakes coastal protection works on its own. These differing arrangements are due to the source of funding for various projects. Similarly, KSCADC takes up coastal protection works and assigns HED (under the Fisheries Department) engineers. And, HED also undertakes coastal protection works on its own. These differing arrangements are due to the source of funding for various projects. • CRZ clearance is not required for rehabilitating the sea wall or groyne fields that already exists. • Wherever clearances are obtained either from KCZMA or the MoEFCC, there is no established practice of sending compliance reports. Monitoring is done but documented reports are not prepared. • Nature-based solutions such as use casuarina, fruit-bearing trees and mangroves are possible in certain stretches but not in all. • Any obstruction into the sea will create one side where sand will accumulate and another side where sand erosion will occur. This requires sand bypassing to be done between the two areas. As this is a continuous operation, it is cost-intensive and hence not done.
2	Experts Advisers	<ul style="list-style-type: none"> • Of the various SMPs, only the Odisha one is comprehensive. Though well-done in terms of preparation, the implementation mechanisms are yet to be established. It is more important to get the institutional mechanisms upfront than to produce another technical report that does not get implemented. • Construction-related impacts are manageable, community will be cooperative. That is not the main issue. Getting to the appropriate coastal protection interventions and designing them correctly so that there are no environmental impacts during the operation phase is the big elephant in the room. Further regular maintenance of these interventions should be institutionalized. • Important to use the sediment cell concept and sediment flows in order to determine the technical design solutions. Else, there will be negative environmental impacts during the operation and maintenance phase. • Technical design solutions should be developed in consultation with the local people who will be affected.

No.	Type	Feedback – Highlights
		<ul style="list-style-type: none"> • There has been a significant increase in coastal flooding and sea over-topping in the last 3/4 years. Once the beach is lost or the sea wall subsides, the coast is exposed to over-topping. • Important to focus on areas that are already affected and those that will be affected as well. • There are lots of studies done. Different projects in different times. These should be reviewed. Their reliability and usability should be assessed. No point in reinventing the wheel. These should be extensively studied for the scientific relevance and appropriately utilized. • Important to establish the implementation mechanism for the SMP; otherwise, it will be just another document. • There is an emergency need for coastal protection. Depending on the particular coastal location, the solution should be decided. There are some locations where the hard physical infrastructure is the only solution. There are others where nature-based solutions and hybrid solutions are possible. • There are 25 fishing harbours along the coast. There is a plan for doing another 25. It is important to build the new harbours only after assessing what will be the impact on the shoreline. • The NGT has taken a firm view that a SMP has to be done. The NGT timelines and requirements have also got to be considered. • Critical coastal locations have to be identified. If there is no beach, coastal population are affected and over-topping occurs, then it is critical.
3	Consulting firms	<ul style="list-style-type: none"> • The technical design of the coastal protection works are most important. GoK has engaged IIT Madras or NCCR to provide the technical support. As consultants, we collect the design information from these agencies. • As per the CRZ clearance, 6-monthly compliance reports are required. As consultants are not engaged after obtaining the clearance, it is not known whether the department or implementing agencies are adhering to this requirement. • Generally, projects having external funding are easier to do EIAs. The required technical designs are available to conduct the assessment. In many cases, even DPRs are not available and that makes conducting EIAs very difficult. • If there are no problems or outstanding issues, then obtaining the CRZ clearance is straightforward. If there are issues, then clarification questions are raised, site visits may also be done and experts are involved. This can be time-consuming. • Though required for all coastal protection works, CRZ clearance is not always obtained by the implementing departments and agencies.

No.	Type	Feedback - Highlights
4	Regulatory Agencies	<ul style="list-style-type: none"> • Whether a section of the shoreline is eroding is checked with the Space Applications Centre VEDAS maps. This Centre is authorized by MoEFCC. • Comprehensive baseline monitoring is required to be done. Not always done • Six-monthly compliance reports during the construction and operational phases should be streamlined. • Based on the compliance monitoring reports, corrective and preventive action should be taken. • Local people understand the sea better and therefore climate change impacts; they have to be consulted or involved in the developing the technical designs. • Biodiversity aspects are not being considered. • For all coastal protection interventions, regulatory clearances are required either at the state-level (KCZMA) and at the central-level (MoEFCC). Implementing departments / agencies should consult the DoECC / KCZMA as all regulatory clearances are routed through this Department / Authority. • CRZ Notification 2011 is applicable even though the CRZ Notification 2019 has been published; this is because the State Coastal Zone Management Maps as per CRZ Notification 2019 are still not prepared. • State Coastal Zone Management Maps are available on the DoECC / KCZMA website

7.1.2 Feedback from Community Consultations

KILA's community consultations covered both the coastal protection investments and disaster recovery works in the river stretches. For the coastal protection investments, a sample of communities was chosen based on the list of locations where interventions were necessary. For the disaster recovery works, the communities who have been directly affected and who will benefit from the PforR activities were selected. The highlights of the environmental issues shared by the community were as follows:

No.	Sector	Feedback - Highlights
<i>A</i>	<i>Shoreline management</i>	
1	Alappuzha	<u>Issues / Problems</u> <ul style="list-style-type: none"> • Sea turbulence, sea level rise and flooding during the months of May, June, and July; • Plastic waste <u>Solutions</u> <ul style="list-style-type: none"> • Increasing sea wall height, using geo-bags and groynes
2	Kasargod	<u>Issues / Problems</u> <ul style="list-style-type: none"> • Sea turbulence and high tides during the monsoon season • Low water quality due to salinity (sea water intrusion) and flooding

No.	Sector	Feedback - Highlights
		<ul style="list-style-type: none"> • Non-scientific harbour construction • Illegal sand mining <p><u>Solutions</u></p> <ul style="list-style-type: none"> • Sea wall barrier using stones and earthen material • Sand-filled bags
3	Kozhikode	<p><u>Issues / Problems</u></p> <ul style="list-style-type: none"> • Coastal erosion and frequent sea rage during monsoon • Subsidence of sea wall, sea level rise sea water intrusion and pollution of fresh water • Destruction to mangroves • Illegal sand mining <p><u>Solutions</u></p> <ul style="list-style-type: none"> • Sea wall - proper design and construction
4	Malappuram	<p><u>Issues / Problems</u></p> <ul style="list-style-type: none"> • Sea turbulence during monsoon months, sea rages, and sea level rise • Changing coastal landscapes and coastal erosion • Overexploitation and deterioration of marine resources; unsustainable fishing practices. • Unscientific construction of breakwaters <p><u>Solutions</u></p> <ul style="list-style-type: none"> • Harbour construction should be done only after the groynes are established; adaptation strategies should be explored. • Increase the height of sea walls and the length of the groynes • Sand bag bunds • Better warning systems for cyclones
5	Thrissur	<p><u>Issues / Problems</u></p> <ul style="list-style-type: none"> • Acute sea surges, sea level rise, storms and saltwater intrusion • Deep sea fishing, large decline in fish stock • Arappa stream flows in the opposite direction • Garbage dumping in water bodies • Shifts in precipitation patterns • Water scarcity and drying up of water • Abnormal weather patters <p><u>Solutions</u></p> <ul style="list-style-type: none"> • Harbour construction and groynes to be done more scientifically
B	<i>Disaster recovery in river stretches</i>	
6	Kottayam, Alappuzha and Pathanamthitta	<p><u>Issues / Problems</u></p> <ul style="list-style-type: none"> • Landslides on the banks • Degradation of agriculture land, erosion washes the fertile topsoil and reduced agricultural productivity. • Overexploitation of water resources, reduction in fish stocks and disruption of river water flows • Sand mining <p><u>Solutions</u></p> <ul style="list-style-type: none"> • Increasing the depth and width of the river

No.	Sector	Feedback - Highlights
		<ul style="list-style-type: none"> • Waste management • Clean ditches and streams before monsoon, • Construct protective walls • Prohibition of unauthorized encroachment • Raise the walls of the lower river bank • Restoration of river basins • Conservation of hydro resource • Mangroves should be planted along the bank where feasible

7.2 Social Consultations

7.2.1 State Departments

The key highlights from the different stakeholder departments / agencies / experts consultations were as follows:

Coastal protection measures such as construction of sea walls are the urgent demand of the community and currently the most technically sound option. The consultations with WRD reflect the urgency of the need to implement some hard solutions for tackling coastal erosion and the impact of flooding and sea attacks on affected communities. Although, site visits and interactions with communities confirm this demand, it was also felt that since the increase in these concerns are only being faced now, there is limited knowledge of any other alternatives that can provide effective protection. There is a need to study the nature-based solutions, which can be led by the communities.

There is strong oversight of Panchayats on all works at the site level, and this helps ensure community's needs and demands are integrated. Yet, there is need to evolve a system to ensure greater community participation and support. The consultations with key departments, WRD, HED, KSCADC, KSDMA and Fisheries highlighted the vibrant and strong local self-governance system of Kerala that ensures there is community vigilance over the works. The process of relocation to relief shelters during flooding is also managed by the Panchayats and there is careful consideration to ensure that help reaches communities in a timely manner. While this minimizes the community complaints, it cannot undermine the need for a greater community ownership over the proposed project activities. The establishment of Community-Based Organizations specifically to focus on coastal protection/river basin management can be explored. This however requires additional skill sets and staffing within the implementing agencies.

Coastal management needs to be seen as beyond just technical and hard solutions. It must be seen as a longer-term strengthening of the marine ecosystem approach. This emphasis came strongly from consultations with HED and Fisheries. Since the livelihoods of affected communities is directly associated with access to sea/river, until and unless these concerns are factored into the planning for coastal protection and shoreline management, there will be resistance from communities if certain measures impact their access to water sources. It is important to be guarded when receiving overwhelming demand from communities for 'sea walls' as the one stop solution to all

their concerns. The Bank needs to ensure it explores all options based on national and global good practices for coastal protection.

There is need for greater focus on social and gender issues integration in existing interventions on coastal protection and coastal and river basin management. The consultations also highlight the acknowledgement on behalf of the department on the lack of adequate skills and staff to be able to ensure all social risks are identified and mitigation measures evolved. It is important to envisage issues such as increased pressure on women and vulnerable groups, such as gender-based violence. Since the departments are under equipped to address these risks, to strengthen the capacity of the PMU/secretariat that will be proposed to implement the project.

7.2.2 Consultations with Community

There is urgent need for coastal protection measures, but also for longer-term solutions for climate change adaptation. The community is able to recognize both immediate protection measures but also the need for climate change adaptation. For them, the impact of climate change is evident in the reduced supply and quality of fish stock. This is impacting the livelihoods of several vulnerable households and women. This is likely to lead to a situation where there will be increased poverty, indebtedness and compromises by women and girls to ensure food security of their families.

Lack of access to drinking water and sanitation facilities is both a health and a social hazard. There is increased pressure on women to find ways to dispose solid waste and garbage. Moreover, coasts and harbours are being used to dump solid waste and plastic waste and this is endangering the marine ecosystem. While this puts all affected communities at risk, it is felt that women and children are likely to face the brunt of this in terms of their health. The lack of drinking water is also posing increased health risks and increasing the drudgery of women as they are seen as responsible for ensuring drinking water for their families.

There is wide variation in how efficient and timely the relief efforts of the state and Panchayats are. The rehabilitation activities are met with both, approval and opposition by the community. Some sites complain of very poorly conceived and coordinated relief measures. The absence of relief centers along the coast is one of the community's challenges. Many poor and marginalized families lost their life savings and assets due to improper shelters and this is mainly due to lack of properly planned and timely rehabilitation measures. Where the engagement of Kudumbasree (the largest women's program in Kerala) was there in planning relief and rehabilitation measures, including in setting up of shelters, there is satisfaction and an endorsement by the community to expand these efforts.

Increased drudgery and invisibility of women's work: Existing data as well as observations data reiterate the differential impacts of coastal erosion and climate change on women and girls. For one, a most obvious impact in sites where there is flooding/ frequent sea attacks is on their increased workload and drudgery during times of flooding, relocation and re-entry into their homes after their stay in relief shelters. The cultural roles and responsibilities ascribe household work, securing food and water and other necessities of the household on women. Even though there were existing state mechanisms to provide food and shelter, the intra-household allocation of the provisions often led to compromise from the women in the households. Some medium and long terms impacts point to the complete 'invisibilization' of women's economic roles. Women who were also allied fishery sector workers on the coast are at times completely out of work during flooding. Climate change has meant dwindling fish stock and gradually the impacts of this percolates to women's roles and incomes thereof in fishery. Moreover, there is a clear expressed concern by women on chances of gender-based violence during their stay in relief shelters and in public spaces due to labour influx.



There are bigger players who have hegemony over the access to fish and other marine resources, with small fisher -folk at the brink of losing their livelihoods. In particular there is diminishing role and returns from fishing related activities of women. The community consultations pointed to how the use of mechanized fishing vessels and over exploitation of marine resources by bigger fishing companies is threatening the ecosystem and reducing the access of individual fisher-folk/households to these resources. Some of the site visits showed that some fisher-folk have now been forced to become 'coolies' or take to unskilled labour helping carry fish stock for bigger companies or more influential fishermen.

Farmers along the river basin are facing deep crisis and looking for alternative livelihood options. This has also had impact on women agricultural workers. Farming has become an unprofitable venture here. The uncertainty of economic gains from farming has resulted in the farmers moving away from farming to other employment opportunities. This will cause a serious threat to food security in the region. Reduction in paddy cultivation has resulted in low employment opportunities for the women in the region. The loss in agriculture and paddy farming have contributed to the unemployment of women in the region. Paddy cultivation is largely dependent on the female workforce. So any reduction in paddy land use severely impacts the livelihood of female labour.

Other issues such as sand mining is causing great damage to the marine and river ecosystems, but there have not been enough measures to tackle this. Despite the legal policies ensuring the ban on sand mining, these measures have not translated into uniform and effective changes in reality. For the community this is a larger issue that is beyond their control or that of their Panchayats.

8 Assessment of the Borrower's Systems against Core Principles

The following are the Core Principles to which the activities of the PforR need to be assessed against:

Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects

Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.

Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards

Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.

Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups

Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

The following table presents the environmental and social systems assessment against each of these core principles:

Core Principle #1	Core Principle #2	Core Principle #3	Core Principle #4	Core Principle #5	Core Principle #6
ENVIRONMENT ASSESSMENT					
<p>Both the regulatory systems and the organizational systems were examined vis-à-vis the Core principle. The GoI / GoK's framework (laws and regulations) - environmental, forests and pollution control acts and rules - were assessed and found to be adequate to manage the environmental effects of the activities under the AF PforR. Of the various legislation, it is the EIA Notification and the Coastal Regulation Zone Notification 2011 that are relevant to the coastal protection investments being planned. The Department of Environment has established the SEIAA and the SEAC to review projects under the EIA Notification. The Department has also established the KCZMA to review projects under the CRZ Notification. These systems are adequate to ensure that the legal compliance is ensured at the state level. These</p>	<p>The GoI / GoK's regulatory systems pertaining to natural habitats, particularly coastal zones, wetlands and forests were assessed and found to be adequate to manage the adverse environmental effects if these arise during implementation. The forest clearance for the diversion of forest land and compensatory afforestation, e.g. for tree cutting, are mandatory. Constructions in the proximity of cultural heritage sites such as protected monuments are also regulated. The AF PforR activities do not include any significant conversion or degradation of critical natural habitats or physical cultural heritage properties. In fact,</p>	<p>The regulatory systems include the Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998. The Act and Rules mandate health and safety compliance for all civil works, and is regulated by the Labour Commissionerate. While the systems are in place, the enforcement needs to be strengthened. Therefore, worker and public safety are generally managed through provisions in the bid / contract documents that the respective Departments - having civil works - will be using to procure its contractors. The provisions will be made part of agreements with contractors and will be monitored. Given the prevailing Covid-19 pandemic situation, this should also include</p>	NA	NA	NA

Core Principle #1	Core Principle #2	Core Principle #3	Core Principle #4	Core Principle #5	Core Principle #6
<p>regulations require projects, particularly those pertaining to coastal protection investments, to be forwarded to the central ministry / MoEFCC. At the centre, there are adequate systems to ensure to review against legal requirements and to prescribe conditions to adhere to those requirements during implementation. Outside of the coastal protection investments, the applicability of the GoI / GoK's legal is only to the activities in the river stretches. These activities have only low and moderate impacts, and hence not a focus of the legal framework. In relation to civil works, there are procedural requirements to make the contractor responsible for obtaining consents from the SPCB or permissions for tree-cutting, if any, from the Forest Department. The consistency with Core Principle #1 was confirmed.</p>	<p>many of the AF PforR activities will be done along the shoreline, which are not natural habitats of any significance. In the unlikely case of any such environmental effects, the respective Departments were found to be competent in addressing the regulatory requirements. The consistency to this principle was confirmed.</p>	<p>additional requirements of the use of PPEs (face masks), physical distancing and handwashing practices that may be required of the contractor and sub-contractor personnel. All of these have been included as PAP recommendations. With this further strengthening, consistency to this core principle was also ensured in the Program design.</p>			
SOCIAL ASSESSMENT					
<p>The sector institutions/ departments have low social capacities primarily owing</p>	<p>The operations under the AF will not support activities that may</p>	<p>Since the AF envisages physical works along the coast and river basins,</p>	<p>The project will exclude investments that may lead to</p>	<p>The proposed investments are envisaged to have</p>	<p>While water resources of the Pamba Basin are contested between</p>

Core Principle #1	Core Principle #2	Core Principle #3	Core Principle #4	Core Principle #5	Core Principle #6
<p>to their technical focus and limited community interface. Given, that the AF will focus on both hard and soft solutions along the coast and river basin, some requiring fairly significant construction/embankment and repair works, these capacities need to be enhanced.</p> <p>The ESSA finds the potential risks to be ranging from moderate to substantial, and recommends the state level institutions/ systems to ensure engagement of additional staff/consultants and creation of clear insitutional mechanisms to assess and manage these social risks and impacts, ensure citizen's engagement and participatory approaches for shoreline/river basin planning and transparency through disclosures and information sharing.</p> <p>Although the state has an effective central level GRM, the ESSA finds that there is currently data on project-related grievances is not available or documented.</p>	<p>have an impact on the religious or cultural resources of communities.</p>	<p>there is need for increased supervision on complete adherence to and application of the regulatory systems for worker and labour management. Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998.</p> <p>In addition, it is proposed to include labour management and safety provisions in the bid / contract documents that the respective Departments - having civil works - for procurement of contractors. The provisions will be made part of agreements with contractors and will be monitored. This will include establishment of a grievance mechanism for workers, including on protection against Gender Based Violence and Sexual Exploitation and Abuse.</p>	<p>physical or economic displacement of communities or individuals.</p> <p>However, it is felt that to manage livelihood impacts triggered by project investments, additional measures will need to be adopted as current focus on these issues is found to be low. For sites where there is temporary relocation envisaged, social screening reports will form the basis of preparation of a comprehensive plan to ensure that specific mitigation measures are evolved.</p> <p>Importantly, in sites where temporary livelihood impacts are envisaged, it is proposed that specific efforts are made to ensure that all the key safety net programs and assistance are accessed by the affected communities. Ensuring awareness on and linkages with</p>	<p>positive impacts on STs and also other vulnerable groups such as SC/Women, elderly and persons with disabilities. However, additional measures will be supported to ensure strong community support and consent on all coastal/river basin management measures. For this purpose, it is proposed that departments bolster their capacities and staffing or engage NGOs/CBOs to capture people's needs and include them in the basin level plans.</p> <p>State systems & established practices are expected to ensure transparency and accountability in preparation of RBP and SMP.</p> <p>There is however risk of exclusion of the voices and perspectives of vulnerable fishing communities, including in land fishing</p>	<p>governments of Kerala and Tamil Nadu (under litigation), program investments are aimed at improved resource utilisation and efficiency and are not creating additional demands on the water resources; hence are not likely to lead to or exacerbate social or resource conflicts / disputes.</p>

Core Principle #1	Core Principle #2	Core Principle #3	Core Principle #4	Core Principle #5	Core Principle #6
<p>This makes monitoring the effectiveness, accessibility and transparency of the GRM difficult. Thus is is proposed a project-level is established GRM to ensure a more efficient redress of complaints.</p>			<p>programs supported by the Fisheries department through its Society for Assistance to Fisherwomen and the Matsyafed Federations under Kerala State Co-operative Federation for Fisheries Development will ensure there is some livelihood opportunities tapped for affected communities.</p>	<p>communities, small and marginal farmers & women from RBP and SMP processes, which may lead to non-application of the principles of equity in the allocation decided for <i>inter se</i> distribution of basin level water resources or in identification of access points to sea/river when construction of sea walls or embankments takes place. Site-specific mitigation measures will ensure these adverse impacts are avoided.</p>	

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9 Overall Findings and Recommendations

This section summarises key findings of the ESSA and then defines key areas for focus and recommendations for the AF PforR.

9.1 Environmental assessment findings

The following are the highlights of the findings of this ESSA Addendum:

- The AF PforR activities, particularly the institutional development (SMP) have the potential to deliver significant environmental benefits. These have the potential to deliver long-term solutions, and can be enhanced and sustained through strengthening of the environmental systems as an integral part.
- All the AF PforR activities related to coastal protection investments fall under the purview of regulatory systems, i.e. CRZ and Environmental Clearance. These clearances through the DoECC and its associated authority such as KCZMA, SEIAA and SWAK will have to be obtained. Further, when civil works are carried out the contractor will need to get consents from the SPCB as required. These are simple, standard and well-established regulatory requirements. The implementing departments and the agencies have the capacity and systems to ensure that these are adhered.
- For the planning and designing the coastal protection investments, GoK has engaged expert agencies such as the National Centre for Coastal Research (NCCR), Chennai and Indian Institute of Technology (IIT) Madras to guide the implementing agencies / departments / organizations and confirm the appropriateness of the technical solutions using location-specific research and analysis. GoK is already ensuring that the technical designs of these coastal protection investments are based on the various scientific studies related to the shoreline dynamics. The current systems and approach is good practice. In this context, the environmental systems will need to be improved through (i) increasing the involvement of the local community in the planning & design of the proposed coastal protection solution; and (ii) streamlining the monitoring and progress reporting, and taking corrective & preventive action based on the monitoring. This strengthening will have to be done by the implementing departments / agencies with support from the RKI Secretariat.
- The AF PforR activities will have localized, reversible and minor environmental impacts during the construction phase. These impacts are not within eco-sensitive or culturally sensitive areas. Some of these impacts are relevant to worker and public safety as well. All of these can be mitigated through management measures for which the departments (WRD and HED) and agencies (KIIDC and KSCADC) have the required capacity. There are some gaps for which recommendations for strengthening systems have been made in the Program Action Plan
- There are certain coastal stretches that require only a hard physical infrastructure solution, whereas there are other stretches that have adopted a hybrid of nature-based and physical infrastructure solutions. Wherever feasible, GoK proposes to use nature-based solutions or hybrid solutions (mix of nature-based and physical infrastructure and beach nourishment). However, the nature of the coast is such that the potential for such innovative solutions appears relatively limited. Nevertheless, GoK proposes to examine further.

- The SMP by itself is intended to deliver positive environmental benefits. This should necessarily build on the plethora of studies available on the Kerala coast. Given the implications of climate change and the number of changes along the Kerala coast, it is important to periodically update the plan to keep it relevant. It is also important to establish appropriate institutional mechanisms and that should be a focus alongside the technical solutions from the very commencement of SMP preparation.

Based on the review of the portfolio of AF PforR activities, it is clear that (i) the already identified coastal protection investments have been chosen keeping in view that the environmental impacts will be minor, e.g. no critical erosion protection works in the vicinity of eco-sensitive areas or cultural heritage locations; (ii) the coastal protection and disaster recovery works to be identified will necessarily adhere to the guideline that is consistent with the Bank's PforR eligibility for financing; and (iii) the existing systems with some strengthening will be able to address the low-to-moderate environmental impacts / risks associated with the AF PforR. Though the legal framework and institutional systems are well-established, the nature of the coastal protection investments is such that careful environmental management oversight is required to ensure the appropriate designs are selected, construction management on EHS issues is executed responsibly and monitoring during the operational phase is carried out. Non-adherence to these systems has the potential to significant substantive environmental impacts.

The environmental risk rating is *substantial* without the strengthened environmental management systems. With the implementing department / agencies' existing capacity, regulatory compliance systems and strengthening of institutional systems through the AF PforR, the residual risk is *moderate*. In specific, the strengthening will include diligent environmental screening Annex 1, upfront community involvement in all activities, enhanced EIA requirements, periodic competence-building training, and improvement of monitoring & reporting through additional environmental staff capacity in both the implementing departments / agencies and the RKI Secretariat.

9.2 Recommendations on environmental aspects

Based on the above findings, the ESSA Addendum has made the following recommendations, which are to be considered as inputs to the Program Action Plan.

Key Recommendations with responsibilities and timelines

No.	Institution / agency	Description	Timeline	Indicator for completion
E1	WRD, HED and agencies	Assigning responsibilities on environmental management to specific Assistant Executive Engineers and Assistant Engineers	6 months from project effectiveness	Evidence of responsibility assignment
E2	RKI Secretariat	Strengthening of the Environmental Team to support Coastal Mission	6 months from project effectiveness	Evidence of responsibility assignment

No.	Institution / agency	Description	Timeline	Indicator for completion
E3	RKI Secretariat / WRD / HED / Implementing agencies / Department of Environment	Directorate and the additional coordination activities. Finalizing the draft environmental screening checklist and criteria for inclusion under the AF PforR	3 months from project effectiveness	Evidence of the final environmental screening checklist and criteria
E4	RKI Secretariat	Developing the Terms of Reference (ToR) for conducting the EIA (emphasizing on consultations and disclosure) and preparing ESMPs for the coastal protection works Developing EHS guidelines for the disaster-related recovery works along the river stretches	6 months from project effectiveness	Evidence of the ToR and EHS Guidelines.
E5	RKI Secretariat	Developing relevant environmental content in the training and capacity building pertaining to coastal protection investments and SMP. Conduct such training for mainstreaming environmental considerations.	Throughout the project period (Orientation + Refresher)	Evidence of training conducted that includes environmental content
E6	RKI Secretariat & DoECC	Facilitating a regular dialogue between the DoECC and the WRD, HED and associated agencies to enable a two-way capacity-building on coastal erosion, protection and SMP issues.	Throughout the project period	Evidence of the periodic meetings facilitating the dialogue, discussions and field visits
E7	RKI Secretariat	Monitor and report the progress on environmental performance of the AF PforR activities as a part of the overall reporting	Quarterly and throughout the project period	Evidence of the periodic reports

9.3 Social Assessment Findings

The investments proposed under the AF envisage a range of critical interventions that the affected coastal communities and communities along fragile river basins, are in urgent need of. All key investments will have significant positive impacts on the affected

communities, especially the vulnerable groups, including women, fisher-folk community and the SC/ST communities. It is felt that many interventions allow a shift from 'do no harm' to an 'enhancing social and gender impacts' approach. The AF PforR activities, particularly Shoreline Management Plan have the potential to deliver significant social and gender benefits. These have the potential to deliver long-term solutions, and can be enhanced and sustained through strengthening of the environmental systems as an integral part.

However, there are likely to be significant social risks on the affected communities ranging from temporary relocation, impacts on livelihoods, exposure to gender-based violence for women and girls, increased workload and drdger of women. Thus, the ESSA team's approach has been to highlight in detail all possible social risks with the aim of ensuring there is full preparedness by the implementing departments and sufficient time to evolve strong mitigation and management measures.

Overall, the assessment of social systems shows that while state institutions and functionaries have reasonable understanding of the importance of mitigation of social risks and impacts, the experience in engaging with communities is limited and this affects their overall capacity to for social management and implementation of mitigation measures. The Water Resources Department district staff have regular interface with communities doing construction works, but the department is not engaging with the communities in seeking their feedback and for evolving appropriate measures. The Harbour Engineering Department undertakes relevant infrastructure development and is cognizant of the need to have a greater understanding of social management issues. But they have limited staff within the institutional structure to address social risks and concerns. Fisheries Department, expectedly, has greater engagement with communities and their programs are seen as providing important assistance to the fisher-folk community.

It is important that sector institutions need to strengthen their capacities to undertake a deeper assessment to identify the vulnerable constituencies of their respective sectors/ sub-sectors and ensure their participation or at least a wider consultation for inclusion of their needs in these plans. This requires reach of the participating departments to prepare specific sector strategies to strengthen the role of women, tribal and fishing communities or migrants as primary benefactors, as they are the most vulnerable to disaster/ climate/ health events and may need to be provided a distinct voice and agency through the participatory planning and decision-making process. The institutional assessment points to areas for increased capacity development, but more critically of the need for putting in place specific institutional mechanisms through dedicated staff to focus on social issues in a timely manner and to ensure effective implementation and monitoring of mitigation measures.

Kerala has a well-functioning central Grievance Redressal Mechanism, through the Chief Minister's Portal, which is widely advertised and a widely used mechanism for citizens to lodge their grievances. Our consultations have also shown that at the district level, the district administrative staff, along with representatives from departments address these complaints on a bi-monthly basis or as is required based on nature or urgency of grievance. At the community level, the more accessible option is that of lodging complaints directly with the local self-governments (Panchayats or Urban Local Bodies)

through local ward members who have regular interface with community. However, there is need for more routine oversight of the project-related grievances and their redressal and the assessment points to defining a more project-focused grievance redressal mechanism.

The mechanisms for citizen's engagement need greater strengthening as most of the implementation departments are focused on engineering and infrastructure development interventions. There is minimal engagement with civil society organizations. Under recommendations, this is one of the areas that has been prioritized through some innovative solutions such as establishing or strengthening of community-based organizations to further strengthen the Panchayat and community interface.

9.4 Recommendations on social aspects

Coastal erosion and climate change require strong technical and scientific solutions. And yet, what will make these solutions work are strong systems, institutions and the people who are at the very helm of impacts of climate change and natural disasters. With high levels of literacy, awareness and the strongest local self-governance institutions, Kerala can be a strong example of inclusive solutions to coastal protection programs and climate change adaptation. The recommendations have been made keeping in mind the immediate requirements of the project which need to ensure that all social risks are identified and mitigated, but are also aimed at supporting the longer-term activities such as shoreline management plan which allow greater scope for enhancing gender and social inclusion impacts for the most vulnerable communities. In sync with the overall parent PforR and AF to strengthen state's systems and capacities, the recommendations focus on building strong institutional mechanisms and capacities of the implementing departments to assess and manage social risks and enhance social/gender impacts.

1 Establishing institutional mechanisms for implementing and monitoring social and gender risk mitigation measures at the state, sector and district levels.

The proposed investments under the AF are likely to have substantial social impacts and therefore it is proposed that a specific institutional mechanism is evolved at the PMU and in each of the implementing departments/agencies. For WRD, which is one of the most implementing departments, it is proposed that there is recruitment of Social Officers for all nine districts. The works that are to be undertaken by the WRD will require awareness, support and cooperation of the community. There needs to be complete transparency on the nature and duration of inconveniences likely to be caused during the constructions and repair works. While the Panchayats play an important link between departments and their communities, in order to ensure there is direct information and communications, it is expected that a dedicated cadre to look at gender and social issues will be an effective strategy.

2 Social Screening Reports to be prepared for all sites prior to commencement of works. These to be consolidated into a Social Assessment Report highlighting risks as well as mitigation measures.

While all proposed investments are aimed at increasing the environmental and social benefits for the affected communities, including for all vulnerable groups, it is important

to undertake social risk screening and prepare site-specific social screening reports. The site visits currently show the critical situation of households with high proximity of households to the coast/river basins. Given that departments currently do not have social staff, for the initial period, it is proposed to engage an qualified and reputed agency to help in carrying out the social screening across all selected sites prior to commencement of works.

3 Comprehensive planning for relocation and temporary relief measures that incorporates gender concerns is critical

While the sites with large-scale relocation and resettlement (social screening of each site to be done) will be excluded, it is recommended that for each of the sites where there is likelihood of temporary relocation of affected families that proper planning for relocation to relief shelters is undertaken. These plans will be evolved in coordination with the Local Self-Governance Department (LSGD) and the Revenue Departments who are entrusted with managing the relief efforts. The following are some of the broad points to keep in mind:

- Identification of appropriate shelters, other than schools that are currently used during flooding as these provide the most spacious and sturdy options. However, any relocation caused by project-related construction or repair work cannot be allowed to use schools that can affect education of children and their safety
- Community consent for relocation/relief shelter site, especially women and persons with disabilities
- Engage civil society representatives for the oversight of the relief shelters as well as to provide any psycho-social counseling and support.

4 Strengthen or establish Community Based Organizations for oversight and community participation in coastal protection works and shoreline management planning

Given the possibility of substantial social risks and impacts, it is proposed to explore the engagement and strengthening of existing CBOs such as Water User Associations where present, women's groups such as *Theeramythri* groups promoted under the Fisheries Department, or where absent, on a pilot basis work with Panchayats to establish CBOs for their participation and oversight over proposed investments under AF. This requires an assessment of the existing focus of the CBOs, their organizational constitution/membership especially to assess if inclusion of vulnerable groups and women is there, their organizational maturity to gauge their potential to input into development of effective community-based solutions and recommendations to enhance social and gender impacts.

5 Stronger and Dedicated Project-Specific Grievance Redressal Mechanism

The state has a reasonably functioning, centralized Grievance Redressal Mechanism (Chief Minister's Portal) in place that most citizens rely on for giving feedback to departments and government agencies. Although some departments like LSGD have their own GRMs there is a need to have a more robust, accountable, transparent GRM that is specific to the current operation and its investments. Given the assessment under the

ESSA Addendum **that there is a gap in any record or documentation on how project level grievances are being logged in and redressed**, the proposed action under Parent PforR ESSA to undertake a 'as is' assessment of the existing department-level mechanisms and to understand how grievances that are logged in to the central system are channeled to the respective departments and to RKI.

A project specific GRM allows closer monitoring and tracking of program specific grievances that will help in refining the sector strategies and better tracking of inclusion, outreach benefits under the project investments. It is proposed that the GRM is simple to use and has multiple offline and online access options. Once in place, the PMU must ensure periodic clustering/ categorization and analysis of complaints to identify the problem areas, provide feedback to the concerned duty bearers and loop the feedback to inform the program strategies and for systems improvement.

6 Ensuring the shoreline management plan is informed by key social, gender downstream risks and impacts

The SMP preparation for the State is an opportunity to be a highly participatory and inclusive process that ensures all possible downstream social and environmental risks are assessed and there are adequate mitigation measures as well as specific proposed strategies to enhance positive environment and social impacts for the communities. At the same time, the SMP should focus on areas which can be supported under the P4R, financing instrument to avoid any high risk interventions and downstream impacts of SMP implementation.

- **Establishment of a multi-stakeholder State Advisory Group/Consortium to lead the SMP preparation:** This must include a wide range of stakeholders from government, civil society, academic, research and private sectors. The idea is to ensure there is strong and adequate focus on social and gender concerns of affected communities from the very beginning of the planning process.
- **Community engagement to ensure SMP fully incorporates their perspectives and suggestions.** It is recommended to explore establishment/strengthening of existing systems that build ownership among the key socially excluded groups and women for shoreline protection and management initiatives. This will ensure their support as well as leadership on various nature-based solutions that have lasting positive social and environmental impacts.
- Undertake a comprehensive **Social Inclusion and Gender Assessment** as part of SMP preparation process. This could lay the ground for women-focused pilot programs under the project. Departments such as Fisheries with their focus on livelihoods for small-holder fish farmers and women could be potential partners. Annex 5 outlines a broad gender analysis framework
- **Establishing/strengthening existing Community Based Organisations to ensure community ownership and input into shoreline management plan.** The ESSA finds that the key implementing agencies do not have strong systems in place for citizen engagement. The Water User Associations under the WRD are at a nascent stage but in some sites there is community participation in irrigation programs and

can be further strengthened through sustained awareness and capacity building efforts. Under the Fisheries department, women's groups called *Theeramythri* can be engaged for this purpose. The Matsyafed Bhavanas also allow for closer engagement with fish farmers and can ensure their increased participation.

- **Greater synergy and convergence between all related departments and agencies who can contribute to coastal protection and management.** The AF PforR proposes to create a Coastal Directorate apart from working with WRD for SMP. However, given the critical importance of this activity, it must be ensured that all key departments are engaged to into this process and ensure the concerns and priorities of affected communities are integrated. For example, department of Fisheries is a critical stakeholder.
- **Bringing in national, regional and global good practices on social risk mitigation and management.** The SMP should build on all good practices and knowledge on how coastal protection programs have addressed social risks and enhanced impacts for affected communities. It is proposed that knowledge management and sharing is a core part of the SMP process through engagement with subject matter experts, especially to bring in expertise on how to ensure SMP is community-centric.

7 GBV Mitigation Plan to prevent and respond to instances of GBV

Increasingly there is national and global data that shows that recurring disasters and climate change increases gender discrimination, including increase in gender-based violence, thereby undoing critical empowerment outcomes from development efforts. Displacement can exacerbate violence as women staying in shelters, camps or temporary settlements are at increased risk of rape, sexual harassment, and other forms of violence due to the lack of physical security, as well as the lack of safe and accessible infrastructure and services.⁶ Moreover, State's own data shows lower human development indicators, including literacy, health and nutrition indicators as well as their interface with public institutions reflected in poorer access to services, access to safety net entitlements, and lack of health and sanitation services and practices. The AF envisaged construction works in some highly fragile sites which have been affected by flooding, sea attacks, coastal and river basin erosion. It is proposed to engage wider stakeholders such as Department of Women and Child Development, Planning Board, Police Department, Local Self-Governance Department and Civil Society Organizations to evolve a GBV Mitigation Plan focused on coastal districts. The preparation of such as plan will require an assessment of current effective state mechanisms on GBV in these areas, but also equally focus on greater community awareness, especially legal and other psycho-social support for women

Key Recommendations with responsibilities and timelines

⁶ <https://www.unwomen.org/sites/default/files/2022-03/Tackling-violence-against-women-and-girls-in-the-context-of-climate-change-en.pdf>

No.	Institution / agency	Description	Timeline	Indicator for completion
S1	WRD	Appointment of Social Officers across all districts	6 months from project effectiveness	Recruitment of Social Officers
S2	HED	Nominate staff for additional social and gender responsibilities/or engage social and gender consultants	6 months from project effectiveness	Staff nominated for additional focus on social and gender concerns reflected in Job Descriptions
S3	RKI Secretariat	Strengthening of the Social Team to include additional social officers/consultants to support Coastal Mission Directorate and the additional coordination activities.	3 months from project effectiveness	All social officers are recruited with clear job descriptions
S3	RKI Secretariat / WRD / HED / Implementing agencies	Finalizing the draft social screening checklist and criteria for inclusion under the AF Pfor	3 months from project effectiveness	Social screening checklist and criteria are finalized
		Prepare social screening reports for each site before commencement of works	3-6 months, but prior to commencement of works	Site-specific social screening reports are prepared to ensure no site requiring land acquisition/ and physical displacement of affected persons is selected
S4	RKI Secretariat / WRD / HED / Implementing agencies	Consolidate all social screening reports to prepare a comprehensive Social Assessment and Enhancing Social Impacts report	6-12 months	Consolidated Social Assessment and Enhancing Social Impact Report

No.	Institution / agency	Description	Timeline	Indicator for completion
S4	RKI Secretariat	Clearly define a project level Grievance Redressal Mechanism with clearly established linkages with existing central and state mechanisms to ensure routine logging of project-related grievances and redressal process and timelines	6 months from project effectiveness	Grievance Mechanism is established Quarterly report on grievances received and redressed are being prepared
S5	WRD/HED	Strengthen or establish Community Based Organizations for oversight and community participation in coastal protection works and shoreline management <i>(Where existing CBOs are there, preferable women's groups such as Theeramythri groups, this can be a reassessment of their existing focus, organizational maturity)</i>	Can be tried on a pilot basis in select sites	To be evolved as a good practice with support from World Bank
S6	RKI Secretariat with support of WCD and NGOs	Gender Based Violence Mitigation Plan to avoid instances of GBV and also ensure redressal mechanisms	Within one years of project commencement	GBV Mitigation Plan
S7	RKI Secretariat	Developing of social and gender modules for training and orientation of social staff in participating departments	Throughout the project period (Orientation + Refresher)	Training modules prepared incorporating good practices on social and gender risk mitigation
S8	RKI Secretariat	Social Inclusion and Gender Assessment for input into Shoreline Management Plan (a participatory and consultative assessment lead by subject matter	Year 2	Social Inclusion and Gender Assessment Report

No.	Institution / agency	Description	Timeline	Indicator for completion
S9	RKI Secretariat	experts/NGOs/research organization) Monitor and report the progress on social inclusion and gender performance of the AF PforR activities as a part of the overall reporting	Quarterly and throughout the project period	Quarterly Social Progress Reports

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10 Program Exclusions

10.1 Environmental aspects

Under the Policy, activities that are “judged to be likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not eligible for financing and are excluded from the Program.” More specifically, PforR financing should not be used to support programs, or activities within programs, that in the Bank’s opinion involve the following:

- Significant conversion or degradation of critical natural habitats or critical cultural heritage sites;
- Air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems;
- Workplace conditions that expose workers to significant risks to health and personal safety;
- Large-scale changes in land use or access to land and/or natural resources;
- Adverse E&S impacts covering large geographical areas, including trans-boundary impacts, or global impacts such as greenhouse gas (GHG) emissions;
- Significant cumulative, induced, or indirect impacts;

10.2 Social aspects

The following activities are proposed to be excluded from the current investments:

- Considering the nature of operations (PforR), any repair and maintenance works requiring land acquisition and large-scale physical resettlement of affected persons and removal of structures will be excluded from the list of investments.
- Sites where works require long periods of temporary relocation of affected communities should be avoided.
- Schools as sites of temporary relief shelters due to project-related constructions or repair works will not be permitted. (Due to recurring disasters/flooding, children’s education has already suffered as schools have been the preferred sites to function as relief centres)

11 Program Action Plan (PAP)

11.1 Environmental aspects

11.1.1 Inputs to the PAP

As indicated in the earlier Chapter 9, these are the key recommendations, which are repeated here in the following table for easy reference.

No.	Institution / agency	Description	Timeline	Indicator for completion
E1	WRD, HED and agencies	Assigning responsibilities on environmental management to specific Assistant Executive Engineers and Assistant Engineers	6 months from project effectiveness	Evidence of responsibility assignment
E2	RKI Secretariat	Strengthening of the Environmental Team to support Coastal Mission Directorate and the additional coordination activities.	6 months from project effectiveness	Evidence of responsibility assignment
E3	RKI Secretariat / WRD / HED / Implementing agencies / Department of Environment	Finalizing the draft environmental screening checklist and criteria for inclusion under the AF Pfor	3 months from project effectiveness	Evidence of the final environmental screening checklist and criteria
E4	RKI Secretariat	Developing the Terms of Reference (ToR) for conducting the EIA (emphasizing on consultations and disclosure) and preparing ESMPs for the coastal protection works Developing EHS guidelines for the disaster-related recovery works along the river stretches	6 months from project effectiveness	Evidence of the ToR and EHS Guidelines.
E5	RKI Secretariat	Developing relevant environmental content in the training and capacity building pertaining to coastal protection investments and SMP. Conduct such training for mainstreaming environmental considerations.	Throughout the project period (Orientation + Refresher)	Evidence of training conducted that includes environmental content
E6	RKI Secretariat & DoECC	Facilitating a regular dialogue between the DoECC and the WRD, HED and associated agencies to enable a two-way capacity-building on coastal erosion, protection and SMP issues.	Throughout the project period	Evidence of the periodic meetings facilitating the dialogue, discussions and field visits

E7	RKI Secretariat	Monitor and report the progress on environmental performance of the AF PforR activities as a part of the overall reporting	Quarterly and throughout the project period	Evidence of the periodic reports
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11.1.2 Implementation Support Plan

The Bank's AF PforR focuses on institutional development by preparing a Shoreline Management Plan (SMP), coastal protection investments and works pertaining to disaster recovery of river stretches. Of these, the Bank's implementation support should focus largely on further building the environmental management capacity as a part of the preparation of the SMP. With regard to the investments, the Bank's implementation support should review and supervise (i) compliance to legal and regulatory requirements, (ii) contractual requirements and (iii) good EHS practices so that all environmental and social risks are effectively managed.

11.2 Social aspects

No.	Action Description	Responsibility	Task and Timeline	Completion Measurement
1.	Establishing an institutional structure for addressing social risks and mitigation measures under the AF	RKI/PMU and implementing institutions (WRD and HED)	<p>Year 1: Completion of recruitment and deployment, where required</p> <ul style="list-style-type: none"> Preparation of ToRs for key social positions in RKI-PMU & other key sector institutions; capacity building modules finalized Recruitment of Social Officers for 9 districts in WRD HED to designate staff with additional responsibilities on social risk mitigation Coastal Management Directorate to have a Senior Social and Gender Specialist and a cadre of Social and Gender Officers <p>Year 2 onwards: regular training of functionaries on different aspects of social management and gender.</p>	IVA

2	<p>2.1 Prepare a Social Assessment report using site specific social screening reports to define clearly all social risks that are likely to arise from proposed investments</p> <p>2.2 Prepare Relocation and Livelihood Restoration Plan for sites where temporary relocation and livelihood impacts are expected</p>	RKI with WRD/HED/Coastal Management Directorate	<p>Year 1: Social Screening of all sites is completed and consolidated into a Social Assessment Report</p> <p>Year 1-2: Relocation and Livelihood Restoration Plans prepared for all sites where such impacts are expected as identified under social screening reports</p>	IVA and Aide Memoires
3	<p>3.1 Establish clear project level GRM to ensure timely redress of all project-specific grievances</p> <p>3.2 Prepare a GBV Mitigation Plan with a GRM to report Gender Based Violence/Sexual Exploitation and Abuse/Sexual Harassment</p>	RKI and key departments for each sector	<p>Year 1: Define a project level GRM Regularly analyze and track grievances to inform the program based on assessment of existing systems & requirement for developing common GRM for RKP proposed under previous ESSA</p> <p>Year 2 (end): A review/stock-take report to assess effective functioning of the GRM</p> <p>Year 2: A GBV specific Action Plan and GRM is in place</p>	IVA
4.	Establish a multi-stakeholder state advisory group to ensure social and gender aspects integration into the preparation of Shoreline Management Plan	RKI	<p>Year 1: Advisory Group is established</p> <p>Year 2-3: Stakeholder Consultations on addressing social and gender impacts under SMP</p>	

Annex 1 Environmental screening form and criteria – Draft

Screening Form for the implementing agency (WRD / HED / Other Agencies such as KIIDC and KSCADC) to submit to RKI Secretariat

General

1. Site Name:
2. Site Type (Coastal / River bank):
1. Site Latitude and Longitude:
2. Type of proposed intervention (Only physical infrastructure / Only nature-based solutions or hybrid):
3. Brief description of proposed intervention (Coastal protection – Sea walls / groynes / nature-based solutions and /or hybrid solutions; River stretches: Debris removal bank strengthening / others):
4. Cost estimate of proposed intervention (Rs. Lakhs):

Site location screening

5. Is the location in or near a Ramsar or nationally declared or state declared wetland? If yes, what is the distance (Onsite / 0-2 km / 2-5 km / Beyond)?
6. Is the location in or near coastal mangroves? If yes, what is the extent within or the distance (Onsite / 0-2 km / 2-5 km / Beyond)?
7. Is the location in or near forest areas? If yes, what is the extent within or the distance (Onsite / 0-2 km / 2-5 km / Beyond)?
8. Is the location in or near marine ecosystems? If yes, what is the extent within or the distance (Onsite / 0-2 km / 2-5 km / Beyond)?
9. Is the location in or near physical cultural properties (old forts, temples, mosques and churches)? What is the distance to the nearest physical cultural properties (Onsite / 0-2 km / 2-5 km / Beyond)?

Physical Impacts screening

10. Please rate the following impacts as Low / moderate / high:
 - Air pollution:
 - Noise pollution:

- Water pollution / turbidity

[Note: Low: Small-sized investment => less air / noise pollution / water turbidity impacts during construction; Moderate: Medium-sized investment => more air / noise / water turbidity impacts]

11. Please rate the construction safety impacts (Low / moderate).

[Note: Low: Less population density => limited construction safety impacts; Moderate: Heavy population density => safety impacts will be more for both the worker and the community.]

Regulatory compliance

For coastal protection works⁷

12. Which Coastal Regulation Zone (CRZ) does the site fall under (CRZ 1 or 2 or 3 or 4)?

13. Has the DoECC / KCZMA been consulted to check for CRZ and Environmental clearance requirements (Yes / No)?

14. Briefly describe the DoECC / KCZMA requirements for obtaining the CRZ and Environmental clearance requirements.

15. Indicate the expected timeline for preparing the documents required for obtaining the MoEFCC clearance and getting the clearance on hand. (Month / year).

For river basin works

16. Has the DoECC been consulted to check for environmental clearance requirements such as those under the Wetland Rules (Yes / No)?

17. If clearance is required, briefly describe the requirements for obtaining the same.

Submitted by

Name:

Department:

Date:

Received by

Name:

RKI Secretariat

Date

⁷ Note: all interventions in the coastal stretches require the CRZ clearance (either at the state-level or at the central-level) as per CRZ Notification 2011.

Environmental Criteria for the RKI Secretariat to verify

Initial Stage - Eligibility under the PforR

1. RKI Secretariat will verifying against the PforR exclusion criteria using the following rules:

No.	Environmental Attribute	Eligibility
1	Significant conversion or degradation of critical natural habitats	If Q12 is CRZ 1, Not eligible. If Q5-8 is onsite, Not eligible.
2	Significant conversion or degradation of critical cultural heritage sites	If Q9 is onsite, not eligible.
3	Air, water, or soil contamination leading to significant adverse impacts	If Q10 is high, not eligible
4	Workplace conditions that expose workers and to significant risks	If Q11 is high, not eligible
5	Significant cumulative, induced, or indirect impacts;	If either Q10 and Q11 is moderate, not eligible

Prior to contract bidding stage

2. Have the stakeholder consultations been done with the beneficiary community and other affected communities (e.g. near the construction camp)? Have these consultations been documented? Has the feedback been integrated with the design of the solutions and the environmental and social management plan? If yes, proceed to the next question. If no, reject the request to go to bidding stage.
3. Has the environmental or CRZ or both clearances, as applicable, been obtained from the regulatory authority (Yes / No)? If yes, proceed to the next question. If no, reject the request to go to bidding stage.
4. Has the environmental and social management plan been integrated with the bid documents as special conditions? If yes, accept the request for bidding. If no, reject the request for bidding.
5. Does the environmental and social management mitigate so that the residual risks are low or moderate? Check using the following table

No.	Environmental Attribute	ESMP Adequacy
1	Air, water, or soil contamination leading to significant adverse impacts. If Q12 is high, have mitigation measures been included?	If yes, accept the request for bidding. If not, reject.
2	Workplace conditions that expose workers and community to significant risks If Q13 is high, have mitigation measures been included?	If yes, accept the request for bidding. If not, reject.
3	Significant cumulative, induced, or indirect impacts. If both between Q12 and Q13 are high	If yes, accept the request for bidding. If not, reject.

No.	Environmental Attribute	ESMP Adequacy
	or moderate, have mitigation measures been included to address the cumulative impacts?	

During implementation

6. Any adverse community complaints or media reports on significant environmental concerns will be temporarily suspended till corrective and preventive action is taken by the contractor and the implementing department / agency.

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Annex 2: Procedure for obtaining the Coastal Regulation Zone clearance⁸

All proposed physical interventions for coastal protection will require to obtain CRZ clearance prior to be considered under the AF PforR. The procedure for CRZ clearance is well-established and is as follows:

The following is the checklist of documents / information as these interventions will have to be considered under the CRZ and EIA notifications:

- Application form – Form I
- Authenticated Building Plan and Site plan
- Estimated cost of the Project
- Copy of challan remitted as Scrutiny fee based on the project cost
- CRZ Status Report prepared by the authorized agencies of MoEFCC
- Disaster Management Plan/Risk Assessment Report from Disaster Management Authority
- Environment Impact Assessment (EIA) / Rapid Environment Impact Assessment (EIA) Report including Environment Management Plan (EMP) by the NABET accredited agency of MoEF&CC
- Hydraulic Modeling Report vetted by Centre Water and Power Research Station (CWPRS), Pune for erosion control measures related projects
- If the proposed intervention will lead to mangrove destruction, a mangrove afforestation plan prepared by the reputed Institute/Agency.
- Consent from Kerala State Pollution Control Board (KSPCB), Kerala State Electricity Board (KSEB), Kerala Water Authority (KWA)

The following is the sequence of steps for obtaining the CRZ Clearance and/or Environmental Clearance:

- Step 1: Submission of application along with above listed documents by the project proponent to the secretary of concerned local body.
- Step 2: The secretary of the local body will forward the application to KCZMA.
- Step 3: The project proponent shall make a detailed presentation before the KCZMA.
- Step 4: KCZMA may approve the proposal and recommend to MoEFCC if only CRZ clearance is required. If environmental clearance is also required, the application will be forwarded to SEIAA. The SEIAA will recommend the proposal to MoEFCC.
- Step 5: The Project Proponent shall make a detailed presentation before the Expert Appraisal Committee, MoEFCC and the CRZ/EC or CRZ & EC will be issued.

Adapted from the note prepared by the KCZMA.

⁸ Adapted from the note prepared by the KCZMA.

Annex 3 Social Screening Forms and Checklists

Social Screening Form for the implementing agency (WRD / HED / Other Special Purpose Organizations) to submit to RKI Secretariat

General

1. Site Name:
2. Panchayat and District:
3. Site Type (Coastal / River bank):
4. Socio-demographic details:
5. Type of proposed intervention (Only physical infrastructure / Only nature-based solutions or hybrid):
6. Brief description of proposed intervention (Coastal – Sea walls / groynes / nature-based solutions and /or hybrid solutions; River stretches: Debris removal bank strengthening / others):
7. Cost estimate of proposed intervention (Rs. Lakhs):

Social Impacts Screening: Site Selection/ Exclusion

1. Based on the type of proposed intervention, what are some of the social risks that are likely to be triggered?
2. Are these risks temporary in nature or irreversible? Specify which ones are temporary and which ones are likely to be irreversible
3. Who are the key groups that are likely to be impacted by the proposed project investments?
4. Which of the above groups are likely to be more significantly impacted and in what ways? Please specify (Eg. Households with maximum proximity to coast/river bank; SC/ST/Women/Persons with disabilities/Any other)
5. Is the proposed investment likely to lead to loss of lands (private/common property/cultural/religious) for the people? If yes, to what extent? Please provide details
6. Is the proposed investment likely to alter land tenure arrangements and or community based property rights/customary rights to land, territories or resources?
7. Is the proposed investment likely to physically displace people?
8. Is the proposed investment likely to require temporary relocation of people? If yes, what are the likely numbers and likely duration of relocation?
9. Is the proposed investment likely to impact the livelihoods of people? If yes, specify for what groups and in what ways

10. Is the proposed investment likely to affect access to key resources and services for the people, especially the vulnerable and marginalized groups? Which specific services are likely to be affected?
11. Is there a possibility that the proposed intervention in any has adverse impacts on gender equality/women's safety and security?
12. Is the proposed investment likely to require construction/repair works? What are likely to be the requirements of labour?
13. Where is the site for labour camp? Will this site expose workers to health and safety risks?
14. When was the last time the community faced flooding/any other natural disaster?
15. Were they relocated to relief shelters? Please specify where and what type of relief shelter did they go to?
16. What has been their experience? What went well? What could have been done better?
17. Are there any Community Based Organizations (CBOs)/women's groups/Self Help Groups active in the site? Please list these out along with their focus areas
18. Are there any ongoing government/donor/civil society lead programs in the site? Please list out with program focus areas.

Exclusion: All sites requiring the physical displacement of people, loss of lands and temporary relocation of people in large numbers and for long duration of time are to be excluded. If the answers to Questions 5-8 are yes, these sites will need to be excluded.

Submitted by

Name:

Department:

Date:

Received by

Name:

RKI Secretariat

Date

Social Impacts Screening for Compliance and Monitoring

General

1. Site Name:
2. Panchayat and District:
3. Site Type (Coastal / River bank):
4. Socio-demographic details:
5. Type of proposed intervention (Only physical infrastructure / Only nature-based solutions or hybrid):
6. Brief description of proposed intervention (Coastal – Sea walls / groynes / nature-based solutions and /or hybrid solutions; River stretches: Debris removal bank strengthening / others):
7. Cost estimate of proposed intervention (Rs. Lakhs):

Social Risk Management during Implementation

1. How many households have been affected by the project related construction and repair work? Please list out
2. What are the type of impacts and challenges faced by them?
 - 2.1 Any restrictions to water resources?
 - 2.2 Any impacts on livelihoods?
 - 2.3 Any impacts on access to services and resources?
 - 2.4 Any other inconveniences, especially for women and other vulnerable groups?
 - 2.5 Any impacts on non-titleholders, street vendors and kiosk owners?
 - 2.6 Any others?
3. Are there any specific challenges faced by women? Has it altered their daily routine/workload/mobility/exposure to gender based violence?
4. Did any households have to relocate? How many? Where have they relocated? How was the relocation managed and by who? Please detail out
5. Were these impacts expected and was the community prepared to face the same?
6. Has the project evolved any mitigation measures to address these challenges? Are these measures being effective? Please provide details
7. Was there a Relocation Plan in place? Was the plan properly implemented?
8. Was the community informed of the type of activities and the duration of the works?
9. Is the community involved in overseeing the works? If yes, in what way?

10. How much labour influx is here in the site? Please mention how many migrant workers, women workers.

11. Where is the labour camp? Does it adhere to health, safety and proper living conditions for workers? Are there separate toilets for women? Is there provision for a creche for children of the workers? Is there a complaints register at the site?

12. Has there been any labour related concerns? If yes, please specify.

13. Are there regular supervision visits to monitor the progress of works? By who?

13.1 Contractors

13.2 Engineers

13.3 Social Officers

13.4 Any other?

14. Is the community aware of who to or how to raise their grievances?

15. Have there been any project related grievances raised by the community?

15.1 What was the grievance?

15.2 Where or to who did they raise this complaint to?

15.3 Has there been a redressal? Please specify the details of action taken on grievance

16. Are there any overall suggestions for improving the project activities?

Submitted by

Name:

Department:

Date:

Received by

Name:

RKI Secretariat

Date

Social Checklist for the RKI Secretariat to verify Social Screening

Initial Stage – Eligibility under the PforR

RKI Secretariat will verify against the PforR exclusion criteria using the following rules:

No.	Social Criteria	Eligibility
1	Physical displacement of people (including non-titleholders and squatters)	Excluded
2.	Land acquisition	Excluded
3.	Voluntary land donation	Avoided
2	Temporary relocation of people	Avoided
4	Workplace conditions that expose workers to significant risks	Avoided

1. Have the stakeholder consultations been done with the beneficiary community and other affected communities (e.g. near the construction site)? Have these consultations been documented? Has the feedback been integrated with the design of the solutions and social management plan? Please mention all relevant information.
2. Has the social screening report for the site been prepared? Were the criteria for inclusion/exclusion properly adhered to?
3. Has the social management plan been integrated with the bid documents/contract document? Are there specific provisions for:

3.1 Regular consultations and information sharing on construction details eg timing with affected community

3.2 Worker safety in construction site

3.3 Labour Camp site working conditions

3.4 Grievance mechanism for host community

3.5 Grievance mechanism for workers

During implementation

1. Is the community aware of the implementation activities- their duration, extent of works required?
2. Is the community aware of the grievance mechanism to lodge their complaints with concerns related to the project? With concerns related to the labour related concerns?
3. Are women aware of any grievance mechanism to lodge a complaint on issues of sexual exploitation and abuse?
4. Are there any adverse community complaints or media reports on significant related to the project works on the site? Please specify the complaints.

(Note: If yes, works to be suspended till corrective and preventive action is taken by the contractor and the implementing department.)

5. Is the social risk mitigation plan for the site in place? Who is responsible for its monitoring?
6. List out mitigation measures that are in place.
7. Is the community satisfied with this mitigation plan?
8. Are there unintended social risks or concerns triggered by the project activities that need immediate attention and management?

Labour Related

9. Does the labour camp site seem safe? Have all social and environmental considerations been adhered to?
 - 9.1 Is there a proper register with all details of workers (disaggregated by gender, migrant/local worker)
 - 9.2 Are there separate toilets for women workers?
 - 9.3 Is there a crèche for children of workers?
10. Are the workers satisfied with their camp site?
11. Do they know the procedure and authority for lodging their complaints?
12. Have there been any complaints so far? How has this been redressed? Who was responsible for redressing?

Annex 4 Summary Community Consultation Report⁹

Kerala has been devastated by a series of natural disasters in the last four years, exacerbated by climate change and human concerns. Extreme climatic phenomena including floods, cloudbursts, cyclones, landslides, coastal erosion, and drought are becoming more common in Kerala, and their negative consequences are most obvious in the environmental and social conditions of coastal populations. Therefore, we need a fair and transparent impact system assessment. The Rebuild Kerala Initiative mainly focuses on building resilience and sustainable ecosystems through risk-informed planning. With support from the World Bank, as a part of PforR funding norms of the project, in its first stage, a social and environmental system assessment (ESSA) has to be conducted in order to understand the gaps in the state system and the capacity of the system. This will ensure efficient planning and utilization of the funds towards planned intervention activities. Even though the initial plan was to consider the Pamba river basin districts as the sole implementation area for the project, at a later stage, a proposal for extending the project to Meenachil and Manimalayar river basins was also taken up. In addition to this, considering the coastal line deterioration and the livelihood condition of the fisherfolks and allied sector, expansion of the project to coastal regions of Kerala is also under consideration. KILA is supporting the World Bank in conducting the ESSA in the extension plan of the project, by organizing consultation at the regional and local levels to mainstream people's participation in the entire planning process for the project.

From the consultations it's very clear that the participants have a fair amount of knowledge about climate change, its impact and causes. They were able to relate climate change as the driving force behind all of the devastating events and its severity or frequency in the recent past. Socio-economic assessment of climate change impacts among coastal communities is challenging as every issue they are facing are related to the loss in employment and income and shelter which is mainly caused by climate related activities. Since they depend entirely on the marine resources for a living it is highly unlikely that the participants were able to differentiate social issues which they are facing from the social issue caused due to climate change. Overexploitation of marine resources, extreme weather events such as cyclones, floods, heavy rainfall, sea-level rise, unscientific nature of harbor construction, depletion of water bodies, and illegal sand mining are identified as the major environmental hazards. All have an impact on people's livelihood in different ways. Climate change will have a negative impact on agricultural productivity. It is threatening food security at an alarming rate and is clear from the socioeconomic assessment of consultations.

Coastal residents are majorly dependent on fishing from the sea. Fish availability has also declined during the past few years. Fish such as mackerel and sardine, which are favorites of Keralites, are largely becoming scarce. As a result of global warming, it seems that the fish are migrating to other regions. The major sea-level rise occurs during monsoon and high tides. They are altering the landforms and destroying natural and man-made structures near coastal areas. In addition to this, most of the area is flooded due to the monsoon and the life of ordinary people becomes a miserable condition. Besides, sand mining has an impact on the coastal terrain and contributes to coastal erosion. Excessive sand mining can alter the river bed, forcing it to change course, eroding banks, and

⁹ Prepared by Kerala Institute of Local Administration

causing flooding. These dangerous activities cause the entire coastal ecosystem to deteriorate. As an example, fish availability has decreased in recent years. The dumping of plastic waste into the water bodies also leads to the diminishing of fish stock. The plastics also leech into the water, degrading the water quality with toxic compounds, and end up harming human and animal health. On the social side, issues with sanitation and hygiene, safe drinking water availability, need for shelter for rehabilitation, unemployment, and coping cavity of vulnerable communities were the major issues that came up in the consultations.

Environmental issues associated with river basins such as flooding, pollution, deterioration of riverbanks, deposition of biochemical wastes, construction activities near river banks, soil erosion, etc. The inconsistency in the installation of gully plugs or check dams must be identified and corrected. Gabions are widely used in river basin protection. Therefore, construction and care of gabions are of vital importance to the nature of the water flows. The local bodies and authorities formulate a suitable mechanism to remove the entire barriers to river basins. Importance of an early warning system and weather advisory for the communities were highlighted in the river basin consultations.

The abnormal weather calamities hinder the normal rhythm of socio-economic conditions. Huge unemployment and financial loss arise among ordinary farmers and fishermen's families. Within ten years, there has been a decline in the wealth of marine fisheries. The loss of houses and residents, as well as the loss of fishermen's boats and fishing nets, is affecting the livelihoods of those who rely on marine resources. Damage caused to houses, infrastructures, historic monuments, subsistence, and transportation facilities are very huge. The major concerns arose from that; drinking water supply and availability problems, health-related problems caused by poor water supply provisions, the amount spent for treatment during the rainy season due to drinking contaminated or poor-quality water sanitation situation in the households, etc.

Climate change has been recognized as the foremost environmental problem and has been a subject of considerable debate and controversy here. Therefore, we require potential mitigation options as well as development of appropriate monitoring tools, especially in the predicted high-risk areas based on assessment of the environment and social impact system. The introduction of geo bags, and pulimuttu (Groyne), the height increase of existing seawalls, sack filling methods and granite barriers, etc are the solutions to achieve coastal protection up to a limit. The consultations had very little traditional solutions to offer. Most of the solutions in the shoreline were focused on scientific construction of ports, harbor and Groyne.

Annex 5 Building Equal Spaces and Opportunities for Women in Coastal Management

A Gender Analysis for Technical Support

When there are adverse impacts for everyone from disasters, coastal erosion and climate change, why is there a need to focus on women?

Women are disproportionately impacted by natural disasters and climate change as they are the primary caregivers, responsible for meeting food, fuel and water needs of their families and communities. Moreover, women are more dependent on natural resources for their livelihoods. When these resources become scarce, it is women who find solutions and coping mechanisms, sometimes at the cost of their own health, safety and well-being.

Women are the first and most crucial responders to, and therefore, most poised to lead climate change adaptation. Evidence shows they were at the frontline of response to pandemic. In Kerala, women members of Kudumbashree were as badly affected with the recurring floods from 2017 onwards, yet they played a crucial role in communities going back to normalcy. This was again the case during the COVID 19 pandemic. Women-led CBOs rose to the occasion and provided food, created shelter and other basic necessities for households, especially the more vulnerable households. Despite these crucial roles, women are largely left out of decision-making processes in which strategies for coping with climate change are designed. Without a doubt, if they were given greater control over these processes, women would lobby for essential resources for climate change adaptation. And so we must work to remove restrictions for women to land rights, lack of access to financial resources, training and technology, and limited access to political decision-making spheres for women to be more effective leaders of climate change adaptation.



Masked up, but not silent... Women talk of the urgent need to focus on their livelihoods. Fishing is giving very low returns and for women who are engaged in cleaning, shelling, processing activities, this has meant either unpaid work, as they do it for their families, or very poor wages, but that's what their families have done from generations.

Community consultations helped highlight the real challenges and difficulties faced by women and girls and helped put a human face to global data on gendered impacts of climate change and disasters.

Women and girls' health and food security are likely to be threatened. Social norms ascribe care-giving roles to women and this makes them responsible for meeting food, fuel and water needs of their families and communities. When these resources become scarce, it is women who find solutions and coping mechanisms, sometimes at the cost of their own health, safety and well-being. The Intergovernmental Panel on Climate Change has highlighted that girls and women are also at higher risk of food insecurity than boys and men, are more likely to die in extreme weather events, and are more likely to

experience mental health impacts caused by climate change. Women face disproportionately higher health risks from the effects of climate change. Increasingly data is being analyzed to understand the impact of climate change on women's reproductive and maternal health. With increases in temperature, rainfall, and humidity there is also rise in vector-borne diseases, such as malaria, dengue fever, and Zika virus, which can cause miscarriages, premature birth and among pregnant women.¹⁰

Climate change and recurring disasters increase the drudgery and invisibility of women's work, threatening their livelihoods irreversibly. Community consultations highlighted the fact that before and post relocation processes but increased pressure on women to secure their household items, pack and unpack these items and also ensure the houses are habitable again. While the government support is there for relocation in most places, these activities of women are almost 'invisible' to program planners and policy makers. A more serious impact is seen on women's livelihood activities. With an already low women's workforce participation, the impacts of climate change can further worsen the situation. Women engaged in fishery sector are suffering first hand due to the depletion of fish stock and marine resources. Their engagement in fish cleaning, shelling and processing is either unpaid, if done for the family or poorly paid if they are contracted by fishing companies.

Women face increased barriers to accessing key services, information and safety net entitlements. While this is also normally true, these barriers are exacerbated during disasters. Women's lack of financial assets and limited rights to land and property put them at great disadvantage when it comes to post disaster recovery. Moreover, they still do not have full access and control over the safety net payments and entitlements provided by the government, which means the decisions to save or judiciously use these resources are also out of their control.

Women and girls face higher risks of child marriage, human trafficking, and gender-based violence due to climate change and natural disasters. Displacement can exacerbate violence as women staying in shelters, camps or temporary settlements are at increased risk of sexual abuse and exploitation and other forms of violence due to the lack of physical security, as well as the lack of safe and accessible infrastructure and services.¹¹ Due to breakdown in regular services and law enforcement many of these concerns go unreported. Even within their homes, as climate change intensifies its impacts on people's livelihoods and scarcity of resources, it can cause stress and disharmony at home and women could be exposed to domestic violence. The National Family Health Survey 5 has already shown an increased in percent of women reporting having faced gender based violence.

So what can the Resilient Kerala Program do?

The proposed investments provide opportunities for integrating women's concerns and promote their deeper engagement in coastal protection and management programs. Some key priorities emerge:

¹⁰ <https://www.unwomen.org/sites/default/files/2022-03/Tackling-violence-against-women-and-girls-in-the-context-of-climate-change-en.pdf>

¹¹ <https://www.unwomen.org/sites/default/files/2022-03/Tackling-violence-against-women-and-girls-in-the-context-of-climate-change-en.pdf>

- **Supporting women’s initiatives and leadership to protect coastal areas** through management of mangrove swamps, nature based solutions to coastal erosion, developing small-scale, sustainable fishing that benefit local communities. This can be achieved through establishment of community based organizations with mandatory membership to ensure that women’s deep understanding and extensive knowledge of their natural environment and resources is tapped effectively and used to inform RKP’s interventions. Programs need to back these efforts with adequate financing and mentoring support.
- **Targeted effort to support women’s livelihood opportunities.** Ensure women’s full integration in the blue economy through policy that recognises women’s work in harvest and post-harvest and provides access to credit and markets, comprehensive social security and occupational health and safety measures based on women’s needs.¹² Assess and strengthen existing programs and policies under key partner departments that enable and support women’s associations, organisations and networks of women. The Fisheries department can be a potential partner and their role under SMP can be explored.
- **Supporting a state level network/platform to give regular advice on how to strengthen gender dimensions of proposed interventions.** This network can comprise academic organisations, NGOs, research organizations, subject matter experts. Quarterly and annual meetings, learning events and collaborative research and documentation with select development partners can be an effective way to influence state policies to support women’s leadership roles in climate change adaptation.
- **The interventions around Open Data Initiative and Climate Budget need to be informed by gender considerations.** Women should be seen as the primary target audience for weather warnings and climate change related information that they can use and apply in their household level work and livelihood activities. With the support around Climate Budget preparation, there is a huge opportunity to make shifts in budget planning by ensuring departments and programs that most strongly impact women are allocated budgets and introduce climate adaptation interventions in their programs.

¹² <https://www.oecd-ilibrary.org/sites/78785e4d-en/index.html?itemId=/content/component/78785e4d-en>

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